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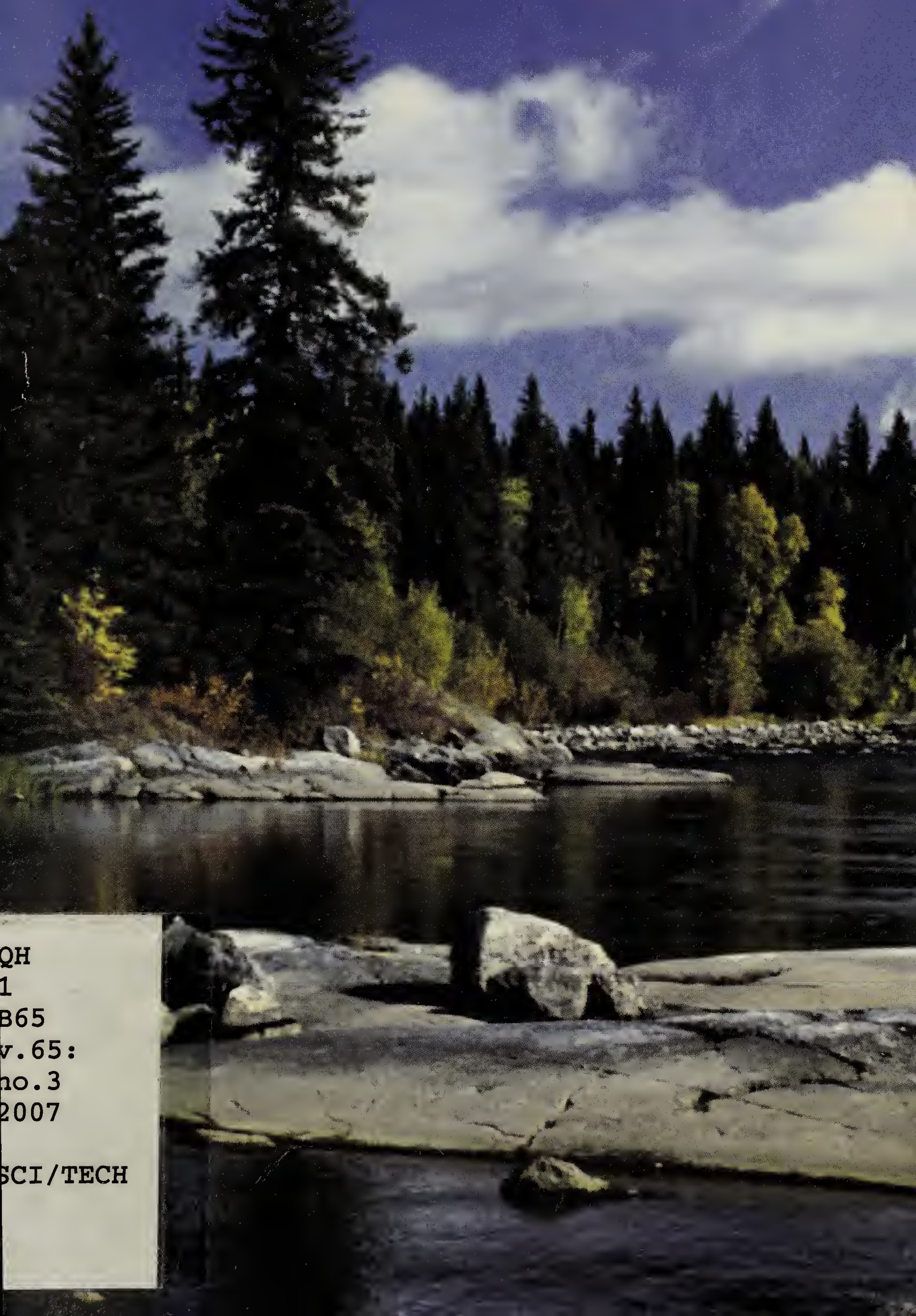

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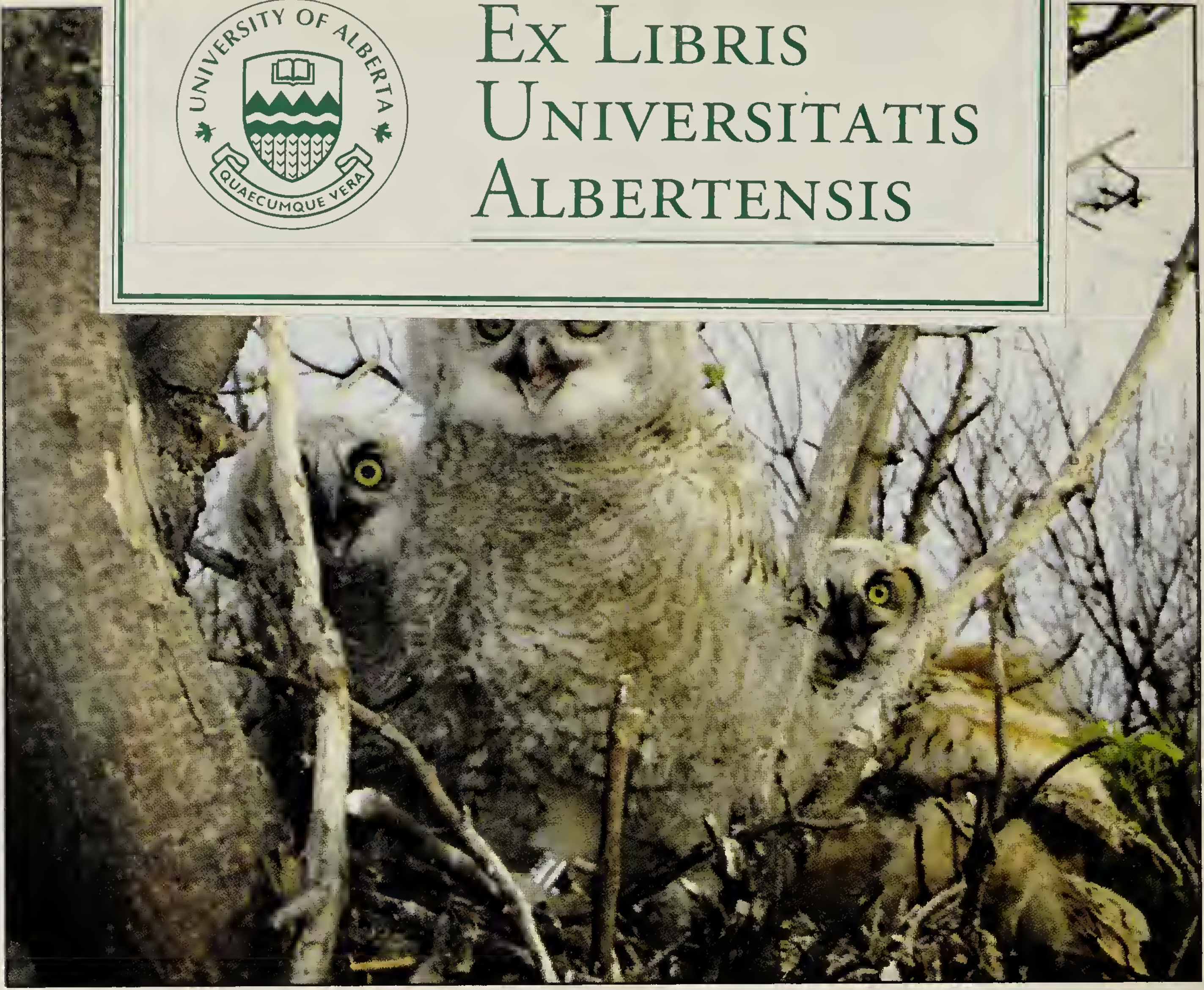

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***Back cover**: Black-necked Stilts on May 5, 2007 at Reed Lake, SK.* *Randy McCulloch*

***Inside front cover**:*
top: Photo taken on May 20, 2007 when orphaned Great Horned Owl chicks were placed in the nest. From left to right, owl #64, #63, #10. See article on page 137. *Jared Clarke*

bottom: Young and adult Black-necked Stilts near Laura, SK on 23 July, 2007. See note on page 161. *George Tosh*

***Inside back cover**:*
top: Albino Purple Martin, 28 July 2007. See note on page 166. *Nick Saunders*

bottom: Eastern Pine Elfin in Saskatoon back yard. See note on page 168. *Craig Salisbury*

CORRIGENDUM

RESULTS OF THE 2006 INTERNATIONAL BUTTERFLY COUNTS IN SASKATCHEWAN by Mike Gollop and Anna Leighton, in the June 2007 issue.

Page 90, second paragraph, "Species totals on the eight counts ranged from 13 at Eastend to 28 at Regina..." should read "Species totals on the eight counts ranged from 13 at Eastend to 28 at Saskatoon..."

AN INVITATION TO READERS

As a fun challenge, we invite you to put together a 250-300 word story that begins with the lines "Hydriomena put **The Gem** in her pocket, said goodbye to her pugs and left the apartment. She had grown tired of the worn and **Square-patched Carpet**, and the pugs had too." The objective is to incorporate common names of moths that appear in the article on page 148. Use the full names as they appear in the article, without alteration, and use each name only once (with the exception of the name Hydriomena). Please put common names in bold font, as shown above, or underline them if hand-written, so they can be identified. Send your story to the editors and we will publish the best of what we receive, in the December issue.

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NATURE

WHY I HATE AUGUST

ROBERT K. MURPHY, Department of Biology, University of Nebraska at Kearney, Kearney, NE 68849, E-mail: <murphyrk@unk.edu>

Next to the house this evening there are about 3,000 swallows packed on only two power lines that stretch maybe 70 m. They're mostly Tree Swallows, but some Barn, Cliff, and Bank Swallows are there, too. Adding it up quickly in my head that's nearly 150 pounds of swallow; the power lines sway ever so faintly under their weight. In the slough below, young American Coots whimper and whistle plaintively for food from tending adults, mother Gadwalls and Ruddy Ducks paddle with their broods of half-grown young through the duckweed, and a family of Pied-billed Grebes presses the edge of the marsh grasses like a fleet of half-submerged submarines. Aside from the steady grasshopper refrain, swallow gossip, and a melancholy chorus of coot chicks, the prairie is quiet. The evening sun is hot, the air still. Dragonflies and damselflies are aloft everywhere, big blue and black ones and small gold ones mostly, hovering and darting in the air, a menace to any mosquito or midge that happens by. An Eastern Kingbird scolds harshly somewhere in the distance, and I imagine it harrying some unlucky young swallow that's just happened by. Wood-Nymphs drift by on gray, dusky wings worn and faded like those of other July butterflies. Marbled Godwits, Upland Sandpipers, and the many sparrows that infused the air with calls and songs only weeks ago are now gone. Gaudy prairie lilies and pastel coneflowers have surrendered to blazing stars, asters, and goldenrods, and the needlegrasses and wheatgrasses have cured and almost stopped growing. Massive cumulus clouds build on the horizon, gray ominous billows with sinister streaks of ashen white below that say hail and rain are being dumped into the next county.

It's August again, the end of nesting season on the prairie. It's my least favorite time of year, the anticlimax over which I lament and even disdain while struggling with impatient anticipation of fall and all the wonderful things it brings before winter hastens life away, downwind, to places south. Spring on the northern prairie is sensational but so short. It's an explosion: it's there, then it's over, too fast. We yearn for it for months, the quintessential rebirth. Spring on the prairie is birds; lots of them, everywhere. Some wing high overhead, arctic-bound or perhaps holding course for a tract of spruce and fir in northern Saskatchewan. Others settle to defend breeding territories, singing as they have for millennia and will yet while there's still some prairie left. Spring is early mornings, late evenings, the days increasingly longer until twilight stretches nearly to midnight; lengthy evening shadows, with the blessed smell of musty grass, damp soil, and dank humus coalesced in cool air masses, drifting downslope; the clamor of chorus frogs and Mallard ducks everywhere; blissfully cool days, the last patches of snow, frosts still on some May and even June mornings. That's the prairie in spring. That's what some of us live for: biologists, ranchers, naturalists, wildlife enthusiasts, all of us prairie freaks who are somehow wedded to native grasslands and sloughs.

I've tried to put my finger on it, why summer seems so sad and the spring before so joyous. It lately struck me that spring is a dear old friend, a wondrous old friend who I look forward to being with. It's anticipation of my friend's arrival, the remembering of old times together: exhilaration, renewal, escape, adventure, discovery. Each year, my friend visits and then leaves. The stay lasts weeks, almost months, but the end is overpowering and unavoidable, the departure gradual but certain. I'm reminded I can only experience so many springs on the prairie. They are so fine I want them all; I want to horde them somehow, but they are fleeting. That is why I hate August. It is farewell.

FALL BIRDS

Sun streaming
through golden leaves
this evening
and a tumult of birds
gathering strength in our yard
a fall frenzy
alternately feeding and bathing
preening, shaking out their plumes
in wonderful disarray.
Despite the urgency of migration
still the robins bicker and chase
as if they didn't have enough
to do this night.

- Bob Nero

OSPREY BANDING PROGRAM NEAR LOON LAKE, SK, 1975 - 2002

C. STUART HOUSTON, 863 University Drive, Saskatoon, SK S7N 0J8, E-mail: <stuart.houston@usask.ca> and FRANK SCOTT, Box 2, GS 317, Saskatoon, SK S7K 3J6.

Osprey flying near its nest *Brent Terry*

A 28-year banding study of Ospreys near Loon Lake encompassed 14 lakes and several smaller water bodies near the north ends of highways 21 and 26 in western Saskatchewan, between 53° 45' and 54° 10' N and 109° 10' and 109° 50' W.

Methods

From 1968 to 1990, FS searched for Osprey nests opportunistically while flying from Loon Lake to his weekly medical clinic at Ministikwan Lake, most often using a Piper Super Cub on floats. Since 1990, aerial surveys based on Loon Lake have been done only once or twice each year, checking on each of the previously known nests.

In the breeding season, nests on Galletly Lake and a slough west of Galletly Lake, were reachable only by a float-plane through 1988. Nests on Ministikwan, Peck, Murphy and Upper Makwa lakes were reached by float-plane or motor-boat, while those on Branch, Fowler and Tullibee lakes were reached by canoe.

1) *Banding of Osprey nestlings, 1975 - 2002.* All nest trees that were deemed safe were climbed during a weekend

in mid- or late July, when young were about two-thirds grown.

2) *Color banding of nestling Ospreys, 1988-1994.* During 7 consecutive years, 145 nestlings received a color rivet band on the opposite leg to the standard USFWS aluminum band.

3) *Building artificial nest structures, 1978-1994.* Because Osprey nest trees eventually die and become less safe for both Ospreys and climbers, we constructed 26 platforms to replace nests in unsafe trees. We placed three of these in windmills where trees adjacent to the original nest were not solid enough for a platform to be built.[2, 3] We chopped down each unsafe tree containing a nest, built a platform in an adjacent solid tree or windmill and moved the contents of the previous nest onto the platform. These 26 structures were built, and sometimes subsequently refurbished, in late March.

4) *Trapping of adult Ospreys on their nests, 1988-1990* and *1993.* Adults were trapped on their nests, by means of an anchored, dome-shaped noose carpet placed over the nest and eggs, late in incubation. For ease of capture, 43 of the 46 trapping attempts were done on platforms. Color bands were applied quickly to the adults trapped, on the opposite leg to that with a standard aluminum band, and the adult was released at once.

Results

1) *Band returns and recoveries*
A nestling, banded at Branch Lake in 1976, was retrapped as an adult on its nest twice, at ages 13 and 14 years, at Tullibee Lake, 21 km from Branch Lake.

Three Ospreys died during their first southward migration: one from Ministikwan Lake was electrocuted at Gould, Oklahoma on October 2; one from Little Fishing Lake was found dead at Fort Collins, Colorado on October 11; and one from Branch Lake was found dead at Colorado City, Texas on October 16.

The skeleton of a Loon Lake bird was found in Nebraska eight years after it was banded.

Osprey nest on platform at Lady Lake, 15 August 2003 *Shirley Johnston*

Osprey young on platform nest — *Brent Terry*

An Osprey, banded as a nestling at Ministikwan Lake on 26 July 1975, was 15 years old when found dead at the Calvin United Church camp at Lake Whitney, Alberta in July 1990. The third oldest bird, following the Tullibee Lake bird above, was from Little Fishing Lake and was hit by a car near Athabasca, Alberta, in September, at 9 years of age.

Among the five migrants that flew the farthest south, two were early arrivals in southern Central America and northern South America, on their first and only journey south: a Loon Lake bird reached Tonosi, Panama (5795 km), where its band was "obtained" on 15 November and a Peck Lake bird was shot at Timbiqui, Colombia (6370 km) before the end of October. A nestling banded on the north shore of Loon Lake was shot almost exactly on the equator at Atahualpa, Ecuador (6640 km) on 25 February of the calendar year after banding. Bands from two others, both from Peck Lake, also were obtained in the year subsequent to banding: one dates from early June at Barbacoas, Narino, Colombia (6480 km) and the other was found dead at Playa Guacalillos, Costa Rica (5385 km) in July. The last two aluminum bands provide additional evidence of Ospreys failing to return north when one year old.[1]

2) *Color bands on nestlings*
There are four sightings of birds nesting at varying distances from their natal nest:

0.5 km from its nest of origin , 9 and 12 years later (1-K Blue, adjacent nests at north end of Makwa Lake, 1994 to 2003 and 2006);

23 km, 11 years later (7-4 Red, Branch Lake to Little Jumbo Lake, 1994 to 2005); and

30 km, 10 years later (O-U Blue, Ministikwan Ravine platform to Highway 99 platform, 1993 to 2003).

A fourth Osprey, wearing a blue band placed as a nestling in 1993, was twice observed 170 km distant, 9 and 10 years later, incubating on a platform built by Henry Tabel at Pratt Lake near Mont Nebo, SK.

A nestling with a color band from the windmill platform south of Jumbo Lake was electrocuted during fall migration eight years after banding, on the shore of the Garrison Reservoir near Pick City, ND.

3) *Trapped adults*

Twelve of 27 adults wearing color bands were re-trapped in a subsequent year, ten at the nest where they had first been trapped, 9 at 1 yr, 3 at 2 yr, 1 at 3 yr, 3 at 4 years. Two adult females moved from one nest platform to a *different* nest platform in a subsequent year, at distances of 1.5 km and 12 km. Only two band numbers were read by telescope on perched adults, one and four years after initial banding.

An adult carrying an aluminum band and a color rivet band was reported from Vera Cruz, Mexico, in a letter dated in January but with the date of finding not provided. An adult with a color band was caught by hand near Loma Bonita, Oaxaca, Mexico, in mid-January, 6½ years after banding.

4) *Artificial nest structures*

Our first six platforms, three built in 1978 and three in 1983, had only two successes. Both were built beside the site of the original nest. The other four platforms were placed randomly, without regard to Osprey territories, and remained unoccupied. All later tree platforms were constructed in a sound tree, close to an occupied tree nest in danger of falling. Of the 22 platforms that were used, the six in the western side of the study area had 13 years of success and 21 years of failure, while the 16 on the eastern side had 84 years of success and 29 years of failure.

Other Observations

Effects of fire.– The last year of this study, 2002, was noteworthy for a major forest fire that burned most of the forest, and the Osprey nests, at the north end of Makwa Lake. That year, young Ospreys in nests up to 5 km distant from the fire perished, possibly from smoke inhalation.

Possible adverse results from adult trapping.– The trapping of adults, the retrapping of adults in subsequent years, and eight failed attempts to trap an adult, caused no apparent morbidity or mortality at the time, and no immediate loss of eggs. However, six to eight weeks later at the visit to band young, based on all nesting attempts with known outcome, there was a diminution in the number of young available to band at these nests, in comparison with nests where an adult had not been handled. At 23 nests, a normal complement of young was reared in spite of the trapping attempt, but there also were 22 examples of nest failure: nest fallen (2 nests), three young dead of unknown causes (2 nests), infertile eggs with no young (3 nests), or a simply failed nesting attempt (15 nests). Thus, there was a 49% failure rate after nest disturbance in comparison with an average 30% failure rate in nests not similarly disturbed. Disturbance consisted of a) climbing at the egg stage, b) temporary application of a tethered noose carpet, and c) capture of the adult.

Longevity of platforms.– Platforms in trees have a somewhat limited life, four have had to be rebuilt, two of them twice. Because of this, we now prefer to build a wooden platform on a more durable metal windmill structure.

Acknowledgments

We thank innumerable tree climbers and platform builders, but especially David G. Miller, Kelwin Wylie, Marc Bechard, Martin Gerard and Marten Stoffel. We are indebted to Marvin Brose for his assistance in locating unused windmills available for our use. We thank Julio Blas for photographing color bands on four occasions after Marten Stoffel first sighted each color band. Alan R. Poole and Marc Bechard provided constructive comment of an earlier version of this paper. An anonymous reviewer must be credited with many improvements.

1. EWINS, P.J. and C.S. HOUSTON. 1992. Recovery patterns of Ospreys, *Pandion haliaetus,* banded in Canada up to 1989. *Canadian Field-Naturalist* 106:361-365.

2. HOUSTON, C.S. and F.S. SCOTT. 1992. The effect of man-made platforms on Osprey reproduction at Loon Lake, Saskatchewan. *Journal of Raptor Research* 26:152-158.

3. SCOTT, F. and C.S. HOUSTON. 1985. Success of Osprey nest platforms near Loon Lake, Saskatchewan. *Blue Jay* 43:238-242.

SUCCESSFUL FOSTERING OF TWO GREAT HORNED OWL CHICKS

JARED B. CLARKE, 323 Habkirk Drive, Regina, SK S4S 6A9. E-mail: <clarkejared16@yahoo.ca>

At noon on May 19, 2007, I received a phone call from Doug Kemp concerning an active Great Horned Owl nest in his yard in the town of Pasqua, SK. That morning, a SaskPower employee notified Doug that a Great Horned Owl had landed on the transmitter box approximately 50 m from his home and had been killed. Three weeks earlier, Doug had found an adult owl in his yard that had apparently died from natural causes. Presuming that both parents were now dead and the owlets were orphaned, Doug collected the two chicks, approximately 5 weeks old and in good condition, and brought them to me in Moose Jaw.

After discussing options with Stuart Houston, who in past years had successfully fostered single orphaned owls into active nests, I decided to do the same. I wanted to place each of the orphaned chicks into a nest containing only one chick, but of the 32 active nests in the Regina and Moose Jaw area that I had found in spring, I knew of only one that contained a single chick. While banding that owlet (#788-56510, hereafter #10) on May 6, I found that its nest was overflowing with food: the remains of two Gray Partridge, one Blue-winged Teal, a Richardson's Ground-squirrel, a Western Meadowlark, a sandpiper and a Short-eared Owl. I chose to place both owlets into this nest, as adding two chicks would not exceed the normal clutch size (2 to 3) for this species and the abundance of food suggested the adults should be capable of providing for all three chicks.

On the evening of May 20, 2007, Elizabeth Travis and I placed the two orphans (band #788-56563 & 788-56564, hereafter #63 & 64) into this nest. Owl #10 was easily distinguished from #63 & 64, as it was a week and a half older and its feathers were quite orange compared to the paler-gray, younger birds. (See inside front cover.) This difference was apparent from our viewing point on the highway, 150 m away.

All three chicks remained in the nest for the next 6 days. On the morning of May 27, the nest was empty but two chicks were located nearby in different trees: bird #10 and one of the orphans. The orphan had the back end of a duck cached beside it, which indicated that the adults had accepted the orphaned chicks as their own and were supplying them with food. On June 3, my last visit, all three chicks were seen perched in a single tree 15 m from the nest and were capable of flying well.

My two concerns when adding these chicks to this nest were that the adults would kill the new birds immediately or that the adults would not feed the new chicks. In this case, the adoption was apparently successful. Great Horned Owls appear to readily adopt chicks that are similar in size to their own, provided that the total number does not exceed a normal clutch. This technique is an effective way of dealing with orphaned owls. Ideally, the orphan(s) should be younger than the original chick(s), so as not to affect the chance of survival of the original chick(s).

Acknowledgments
Thanks to Stuart Houston for his advice and helpful comments on this manuscript. Also thanks to Doug Kemp for his watchful eye and passion for these owls, and to Elizabeth Travis for her help in the field.

SWAINSON'S HAWK RESPONSE TO FIRE AT LAST MOUNTAIN LAKE NATIONAL WILDLIFE AREA, SK

PHILIP S. TAYLOR, Canadian Wildlife Service, 115 Perimeter Road, Saskatoon SK, S7N 0X4

The Canadian Wildlife Service has conducted over 50 prescribed burns at Last Mountain Lake National Wildlife Area (LMLNWA), beginning in 1980, to manage the native grasslands and improve habitat for migratory birds and other wildlife. Our observations of diurnal raptors responding to fire are very similar to the experiences at Lostwood National Wildlife Refuge, ND.[1]

Our burns are most frequently done in late March to early June, less frequently in mid-August to early November, and range in size from under one hectare to over 280 ha. Raptors normally arrive at LMLNWA at different times: Ferruginous Hawk and Northern Harrier in late March or early April; Red-tailed Hawk in early to mid-April; and Swainson's Hawk in mid- to late April. Abundance of these raptors during the breeding season at LMLNWA varies between years but the averages in recent years are Ferruginous Hawk (0-1 pair), Red-tailed Hawk (<5 pair) and Swainson's Hawk (15-30+ pair). Northern Harrier are a common nesting species but no quantitative data are available.[2] LMLNWA is near the northern limit of the breeding range of Swainson's and Ferruginous hawks, approximately 340 km north of Lostwood National Wildlife Refuge. Therefore, hawks present in our area are most likely to be summer breeding residents, rather than migrants.

Swainson's Hawks, when present at LMLNWA, arrive at large prescribed burns soon after the fire is started and often within the first 30 minutes. Hawk numbers observed are lower than at Lostwood National Wildlife Refuge, usually between 1 and 6 individuals at any one time. During a burn in the second week of April 1992, two Swainson's Hawks arrived on site,

Swainson's Hawk hunting over burned grassland at Last Mountain Lake National Wildlife Area *P.S.Taylor*

making them the first arrivals for that year. Swainson's Hawks actively hunt around the fire front, using the thermals created by the fire to maneuver over the burned and unburned grassland, dropping down to catch small rodents. They do not appear to avoid smoke rising from the fire, but instead use the upward moving heated air to gain altitude. Once present at a burn, one or more Swainson's Hawks are frequently, and often continually, in evidence. After the fire burns out, the hawks are seen perched on the ground with distended crops, or running and hopping over the burned prairie in the act of catching rodents amongst the ashes.

We have not observed Ferruginous Hawks hunting near fires while we conducted our prescribed burns. We have observed single Red-tailed Hawks come near to active fires on a few occasions, and they may have hunted over the burned grassland, but if so, it was infrequent and did not occur throughout the entire fire event. One or two Northern Harriers were observed at many fires, particularly those adjacent to marsh habitats, however, the harriers did not stay in the immediate burn area for any length of time and did not increase in numbers during the burn event.

The behaviour of Swainson's Hawks around prescribed fires at LMLNWA has led us to conclude that they are the most fire adapted species of diurnal raptor breeding in the area. Their attendance at a burn is predictable and expected. Because fire has largely been eliminated from the remaining grasslands of the Canadian prairies, today Swainson's Hawks have less opportunity to use their adaptation to take advantage of fire while foraging, except in special sites like Last Mountain Lake National Wildlife Area and Lostwood National Wildlife Refuge, where these historically natural disturbances have been reintroduced to the ecosystem.

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2. TAYLOR, A. 2000. Raptor nest survey 2000 on the Last Mountain Lake National Wildlife Area with historic review. Unpublished report: S-29. Canadian Wildlife Service, Last Mountain Lake National Wildlife Area. 30 pp.

CASPIAN TERN BANDED AT DORE LAKE, SK: THIRD OLDEST AT 28 YEARS, 7 MONTHS

C. STUART HOUSTON, 863 University Drive, Saskatoon, SK S7N 0J8, PHILIP D. MCLOUGHLIN, Department of Biology, 112 Science Place, University of Saskatchewan, Saskatoon SK S7N 5E2, and JAMES PINSON LUDWIG, 607 Canard, Port Williams, NS B0P 1T0.

At 4:00 a.m. on 8 July 1978, A. B. (Tony) German, Mary Houston and the senior author motored to Dore Lake, SK. On Rock Island (54° 43'N and 107° 9' W) at dawn the following morning, we banded 171 Caspian Terns on the flat grassy plateau in the center of the island, as well as 151 flightless California Gulls and 5 Herring Gulls. We flushed three Lesser Scaup from nests with 11, 9, and 9 eggs; two of the scaup nests were only 2.2 m apart. We did not disturb the Double-crested Cormorants and American White Pelicans on the rocky point.

This 1978 trip was our fourth to Dore Lake. The 321 Caspian Terns banded between 1964 and 1978 yielded 7 recoveries (Table 1). Two terns banded in 1978 were recovered: one in January 1979 at Pecan Island, Louisiana; the second on 11 January 2007, near Kenner, Louisiana. With a birth date of about 1 June 1978, the latter was 28 years, 7 months old (28.6 years). The banded Caspian Tern had been struck by the wing of a Boeing 737 (a group of 16 gulls was involved with the tern in the air strike while the plane was taxiing) and the tern died shortly afterwards. Mike Scarlato had actually watched the tern die (Mike Scarlato, April and June 2007, pers. comm.).

I fully expected this tern to set a new longevity record. I went to the banding longevity website where the oldest terns were as follows: Roseate Tern - 21 years, 0 months; Royal Tern - 24 years, 3 months; Sandwich Tern - 22 years, 1 month; Common Tern - 25 years, 0 months.[5] The oldest Caspian Tern was listed at 29 years, 6 months, so perhaps the Dore Lake tern was second oldest? I next obtained from the Canadian Wildlife Service Ottawa banding office a printout of all 3475 Caspian Tern recoveries and encounters.

What an interesting data set this was! Long-term studies of Caspian Terns, chiefly by the Ludwig family on islands in Lake Michigan, have involved recaptures of breeding birds on their nests, these recaptures peaking among terns that were four to eight years of age.[1,2] On 747 occasions, an adult tern had been recaptured on its nest, (using either a cannon net or nylon nooses around the rim of the nest,[3]) within the same ten-minute block of latitude and longitude in which it had been banded as a nestling, and on 724 occasions, the recapture was in a different 10-minute block from where it had been banded. It was common for recaptured terns to require their bands to be replaced because size 5 aluminum bands on terns lose, on average, 3% of their weight per year and because the band falls off when 50 to 65% of the metal has worn away.[4] Among the recaptured birds, 625 had received replacement bands: 530,

Table 1. Encounters of all known Saskatchewan Caspian Terns and the three oldest from Michigan

BANDING, Dore Lake, SK			**ENCOUNTER DATA**						**Age**		
Band #	**Date**	**Year**	**How found**	**Date**	**Year**	**Location**	**Distance km**	**Direction degrees**	**Yr**	**Mo**	**Dy**
0565-99386	Jun 30	1964	fd dead	Sep 25	1964	Bremen SK	278	159 SSE	0	3	25
0645-60553	Jul 8	1965	shot	Oct 12	1966	Ciudad de SLP Valles Mex	3702	166 SSE	1	4	12
0645-60574	Jul 8	1965	fd dead	Sep 1	1972	Hamburg AR 8 mi S	2665	147 SE	7	3	0
0695-54371	Jul 19	1969	skeleton	Nov	1976	L Sabine TX	2968	153 SSE	7	?	?
0695-54364	Jul 19	1969	shot	Dec 24	1978	Brazos R TX mouth	3030	157 SSE	9	6	24
0805-55389	Jul 8	1978	fd dead	Jan 9	1979	Pecan Is. LA	3043	151 SSE	0	7	9
0815-11841	Jul 8	1978	aircraft	Jan 11	2007	Kenner LA	3080	147 SSE	28	7	9
BANDING, Beaver Is., MI											
0495-72835	Jul 3	1959	fd dead	Jan 26	1989	Lockport LA	1857	196 SSW	29	7	16
0665-03700											
0805-12087											
0575-38604	Jun 28	1961	T & R*	Jun 10	1990	Beaver Is MI	0		29	0	10
0754-02926											
0625-55975	Jun 25	1964	T & R*	Jun 1	1992	Beaver Is MI	0		28	0	0
0604-41819											

*T & R - trapped and released alive
SLP - San Luis Potosi, Mexico
Extra band numbers above each final band number indicate a thin band that required replacement.
Age is calculated from hatching date of 1 June.

once; 73, twice, and 22, three times, for a total of 742 replacement bands on 625 terns.

Among the 3,475 recoveries and encounters, the three oldest were each banded on the Beaver Islands in Lake Michigan at 45° 40' N, 85° 10' W by F.E. Ludwig or his son, J.P. Ludwig (Table 1). Assuming that each tern was hatched about 1 June, the oldest, after being recaptured on its nest at 7, 8 and 18 years and having its band replaced twice, was found dead at Lockport, Louisiana, at 29 years, 7 months and 16 days (29.67 years). The second oldest was recaptured at 29 years and 10 days of age (29.08 years) and its band had been replaced once. The third oldest, recaptured at its nest site on the Beaver Islands, was precisely 28 years old and also had had one band replacement.

The recent Saskatchewan tern that met its fate at the Kenner, Louisiana airport was thereby the third oldest Caspian Tern known from North American banding. It was all the more exceptional because it was still carrying its original band. Mike Scarlato mailed this band to Saskatoon. The band number was clearly visible even though the band was of irregular thickness and light in weight. The band varied from 0.71 to 0.84 mm in thickness, and weighed only 0.4197 grams. The reference band of the same size 5 was 1.07 mm thick and weighed 0.7188 grams. Thus the 28-year-old band had lost 41.6% of its weight, and the Caspian Tern is the oldest on record carrying its original band.

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* * *

“Thousands and thousands of birds, both great and small, stretch in endless wisps away to the south....High above all were the eagles. Sailing on mighty pinions, they soared in immense circles. What did distance mean to them? Some were weaving their circles so high that they were barely visible. Below them, but still high above the earth, flew the geese. These wary birds flew in regular gaggles, beating their powerful wings, sending their *honk honk* ringing through the air. At a lower level bustled the duck...And all these birds were speeding southwards, a magnificent sight.”
V. K. Arseniev, *Dersu the Trapper*, p. 30-31.

COLLECTION RECORDS OF THREE AQUATIC BUGS (HETEROPTERA); PYGMY BACKSWIMMER (PLEIDAE), WATER SCORPION (NEPIDAE) AND MARSH TREADER (HYDROMETRIDAE) FOR SASKATCHEWAN, CANADA

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Aquatic sampling in Saskatchewan by the authors has collected specimens of pygmy backswimmers, *Neoplea striola*, water scorpions, *Ranatra fusca*, and marsh treaders, *Hydrometra martini*. According to Mau et. al., *Checklist of the Hemiptera of Canada and Alaska*, published in 2000, there are no previous records for the province. There appears to be some confusion regarding the distribution of the latter two bugs in Saskatchewan however; an article published in 1994 reported *R. fusca* as occurring in southern parts of all Canadian provinces[13] and in 1987 another paper reported *H. martini* as occurring in Manitoba, Saskatchewan and Alberta.[12]

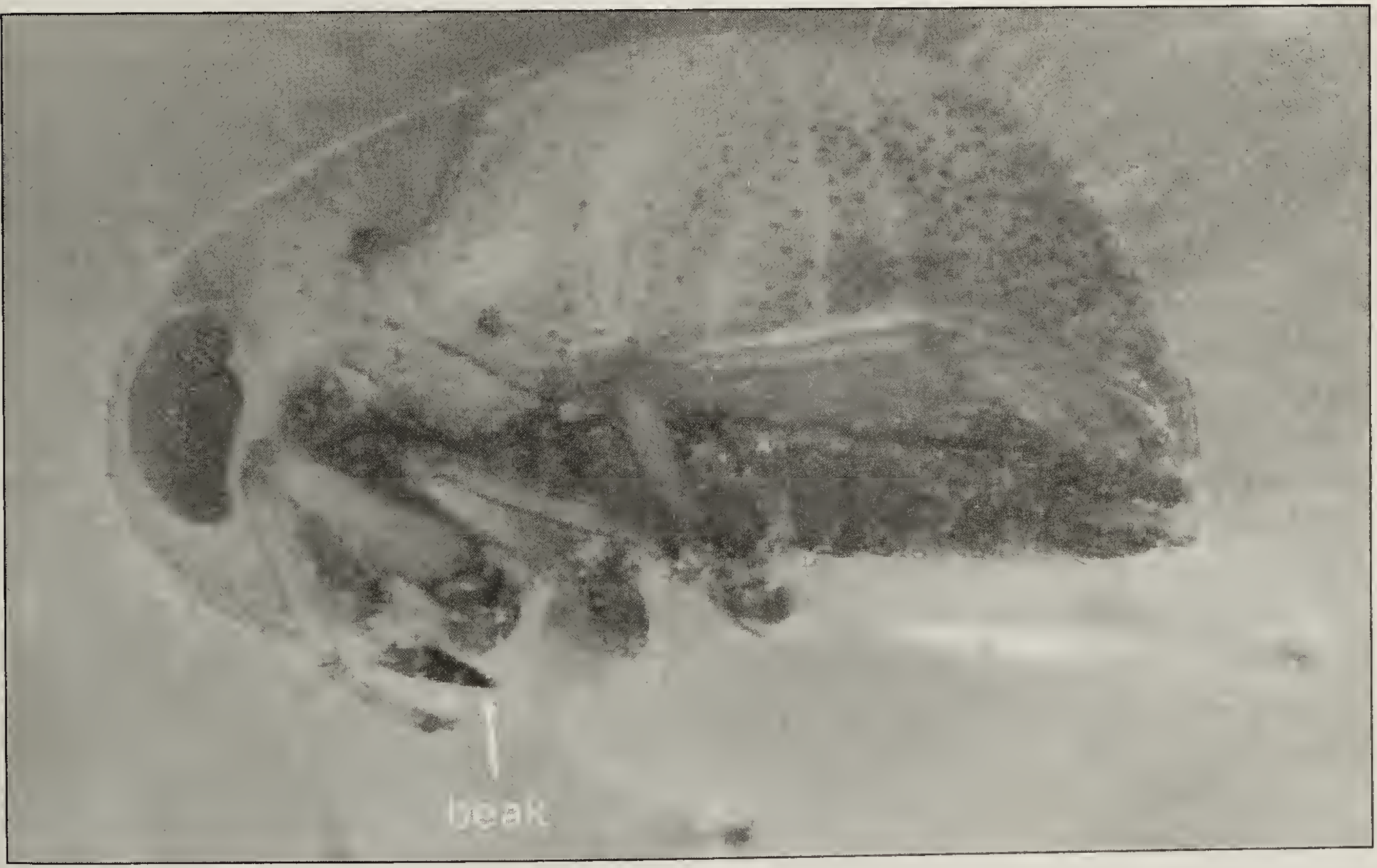

*Figure 1: Side view of pygmy backswimmer (*Neoplea striola*) showing beak.*
D. Parker

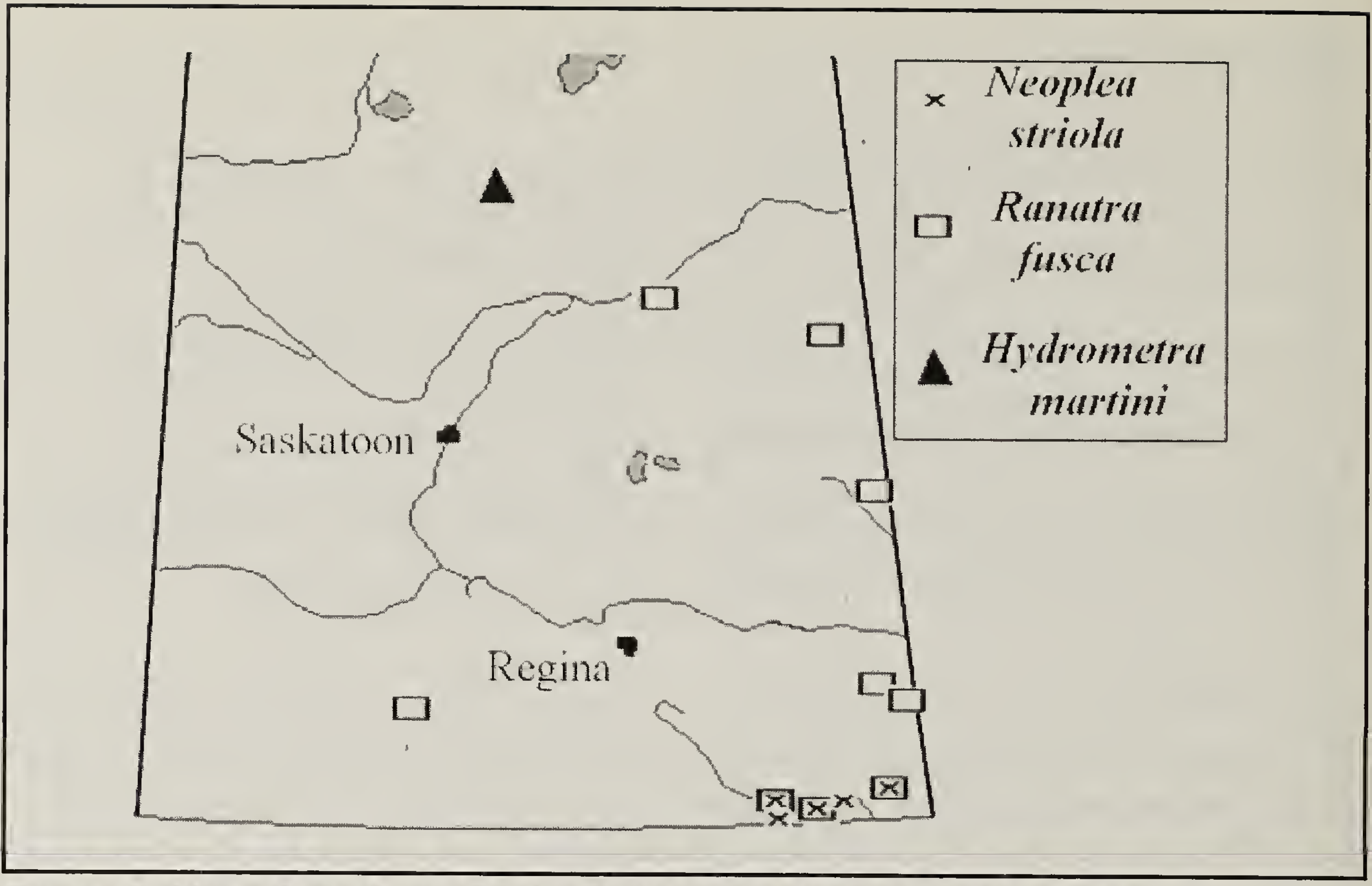

Figure 2: Map of southern Saskatchewan showing collection sites.

These two earlier papers did not provide a basis for the reported presence of these bugs in Saskatchewan. Our collection results confirm the presence of all three bugs in Saskatchewan.

Pygmy backswimmer (*Neoplea striola* (Fieber): Pleidae)

Pygmy backswimmers are easily over looked, as they are only about 2 mm in length (Figure 1). The body is flattened ventrally and rounded dorsally. The legs are all relatively short as is the beak (mouthparts). The hind legs have sparse swimming hairs but pygmy backswimmers are weak swimmers, preferring to crawl through the submersed vegetation.[5] The body as a whole has no obvious markings, but under the microscope the first pair of wings and most of the body are coarsely punctate (pock-marked). All stages are predaceous on small invertebrates, including seed shrimp and insect larvae.[1,5] The short beak is used to pierce the bodies of the prey and the internal fluids are sucked out.[10] Eggs are laid into submersed aquatic plants.[1,11] The life cycle has five larval instars (growth stages) and takes about 60 to 70 days to complete.[11] There appears to be only one generation a year, with the adult being the overwintering stage.[1,11]

Specimens were collected in southeastern Saskatchewan in 2006 from Lightning Creek at Carnduff (49° 12' 17" N; 101° 43' 03"W), Long Creek (49° 03' 47"N; 103° 29' 54"W) and three sites associated with the Souris River: Rafferty Dam (49° 07' 27"N; 103° 01' 59"W), Roche Percée (49° 04' 43"N; 102° 45' 12"W) and at Highway 9 (49° 04' 28"N; 102° 17' 51"W) (Figure 2). Collection locations ranged from slow-moving streams associated with cultivated agricultural land (Long Creek) to larger rivers with Manitoba Maple (*Acer negundo*) groves along the banks (Souris River at Highway 9).

It appears that this is a new record for *N. striola* and the family, Pleidae, in Saskatchewan. This is the only species of the family reported from Canada.[8] *N. striola* has previously been recorded from Manitoba, Ontario, and Quebec.[8] In the United States, it has been reported throughout New England and in North Dakota, Montana, Florida, Kansas, Texas, Colorado and California.[2,3,4,6,7,8,15]

The waterways from which pygmy backswimmers were collected in Saskatchewan–Souris River, Long Creek and Lightning Creek–all flow into North Dakota and ultimately into Manitoba. As of yet, there are no collections from other waterways that flow directly into Manitoba, such as the Qu'Appelle River and Pipestone Creek, even though Pipestone Creek does connect with the Souris River system in Manitoba. At present, the immigration route for this species appears to be from the southeast through North Dakota, rather than straight east from Manitoba.

Water scorpion (*Ranatra fusca* Uhler: Nepidae)

Adult water scorpions, identified by completely developed wings, have a long slender appearance, with a body 35 to 45 mm long but only 8 mm, or less, wide (Figure 3). The slender appearance is accentuated by two long breathing tubes at the end of the abdomen, which add 40% to the total length. The overall body colour is brown. The forelegs are modified for grasping prey. The other two pairs of walking legs are long and slender for clinging onto submersed vegetation and other substrates. The head is short in proportion to the body, with large eyes and a pointed beak. Adults overwinter in submersed vegetation and debris.[12] Egg to adult requires about 47 days and includes five larval instars.[9,12] Water scorpions are predaceous in all stages.[13] They use their modified grasping forelegs to capture other insects, crustaceans and even small fish and tadpoles.[13] The prey is held by the forelegs while the pointed beak pierces the prey and sucks out body fluids.[10]

In east-central Saskatchewan, water scorpions were collected from the Red Deer River at Rendek Elm Forest (52° 54' 38" N; 102° 01' 49" W) in 2002 and 2003. Sampling in 2006 collected specimens from additional sites in east-central Saskatchewan; fish rearing ponds near the Highway 6

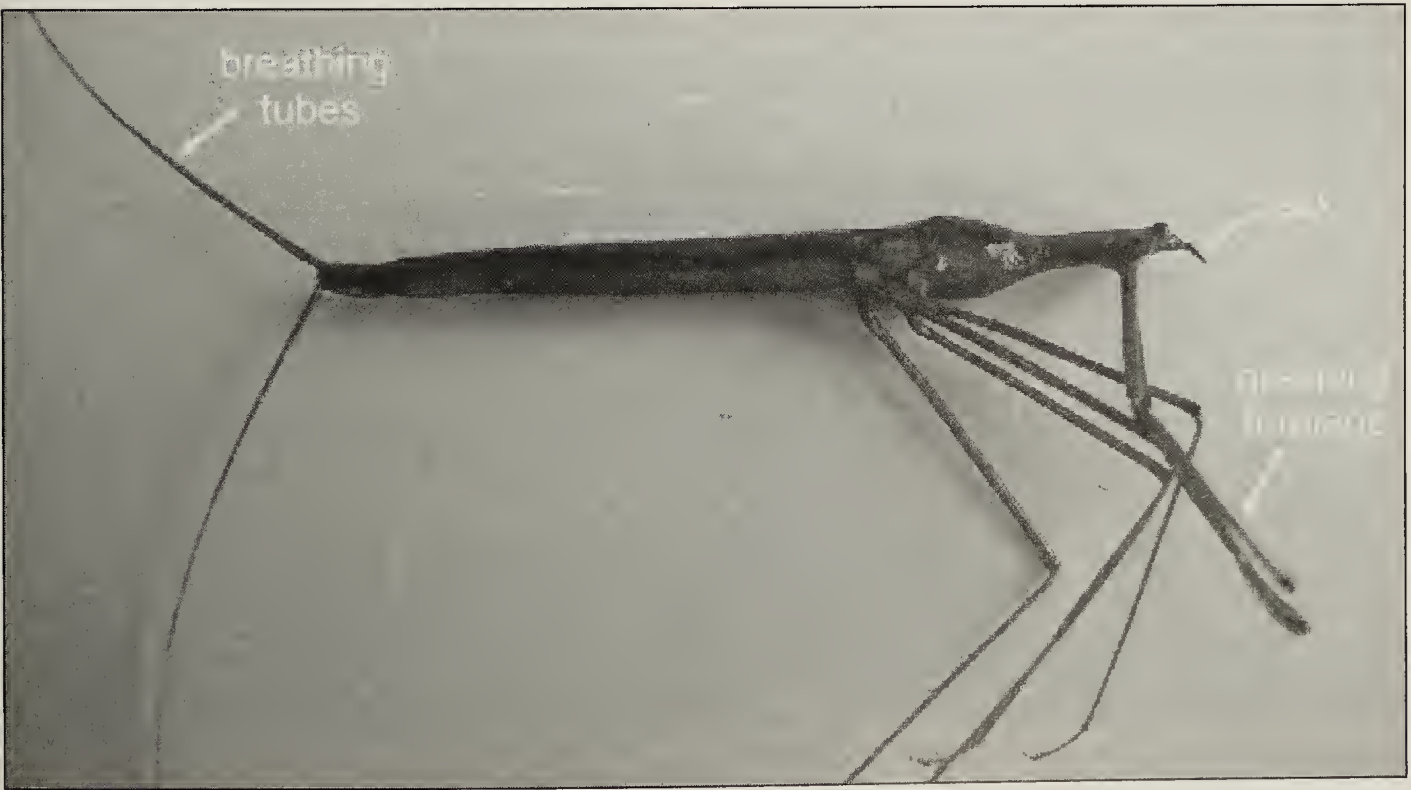

*Figure 3: Side view of water scorpion (*Ranatra fusca*) showing breathing tubes, beak and grasping forelegs* *D. Parker*

crossing of the Saskatchewan River (53º 15' 09" N; 104º 29' 07" W) and from Little Boggy Creek at Runnymede (51º 28' 25" N; 101º 41' 54" W). Specimens also were collected from southeastern Saskatchewan in 2006 : Little Pipestone Creek at Moosomin Lake Reservoir (50º 02' 02" N; 101º 41' 41" W), Pipestone Creek before it enters Manitoba (49º 53' 11" N; 101º 26' 57" W), Lightning Creek near Carnduff, (49º 12' 17" N; 101º 43' 03" W) and from two sites on the Souris River–one associated with Rafferty Dam (49º 07' 27" N; 103º 01' 59" W) and the other at Roche Percée (49º 04' 43" N; 102º 45' 12" W). Farther west, they were collected from the Wood River near Gravelbourg (49º 54' 07" N; 106º 29' 48" W) in 2006 (Figure 2).

Water scorpions are known to inhabit all types of aquatic habitats.[9,12] The specimens collected were associated with submersed vegetation, trailing fibrous roots or stick entanglements in slower reaches of the creeks and rivers. They were also collected in artificial fishponds.

R. fusca is one of three species of water scorpion collected in Canada.[8] *R. fusca* has been reported from British Columbia, Ontario, Quebec, New Brunswick, Prince Edward Island and Nova Scotia.[8] In the United States, it is found throughout the northern states south to North Carolina and Texas, west to Kansas and California.[13]

Water scorpions appear to have entered the province on a broad front from Manitoba via the Red Deer River, Pipestone Creek and possibly other waterways, in addition to those connected with North Dakota. The collection from the Gravelbourg area suggests a wide east-west distribution in Saskatchewan.

Marsh treader (*Hydrometra martini* Kirkaldy: Hydrometridae)

Marsh treaders are very slender in appearance (Figure 4). The adult specimen collected is 9 mm long and 0.5 mm wide. Unfortunately, it has been broken into two parts just anterior to the last pair of legs. The overall body colour is brown. The head is elongated and makes up almost one quarter of the total body length. The eyes are set on the sides of the head, well back from the anterior end. All the legs are thin and similar to each other. The beak is

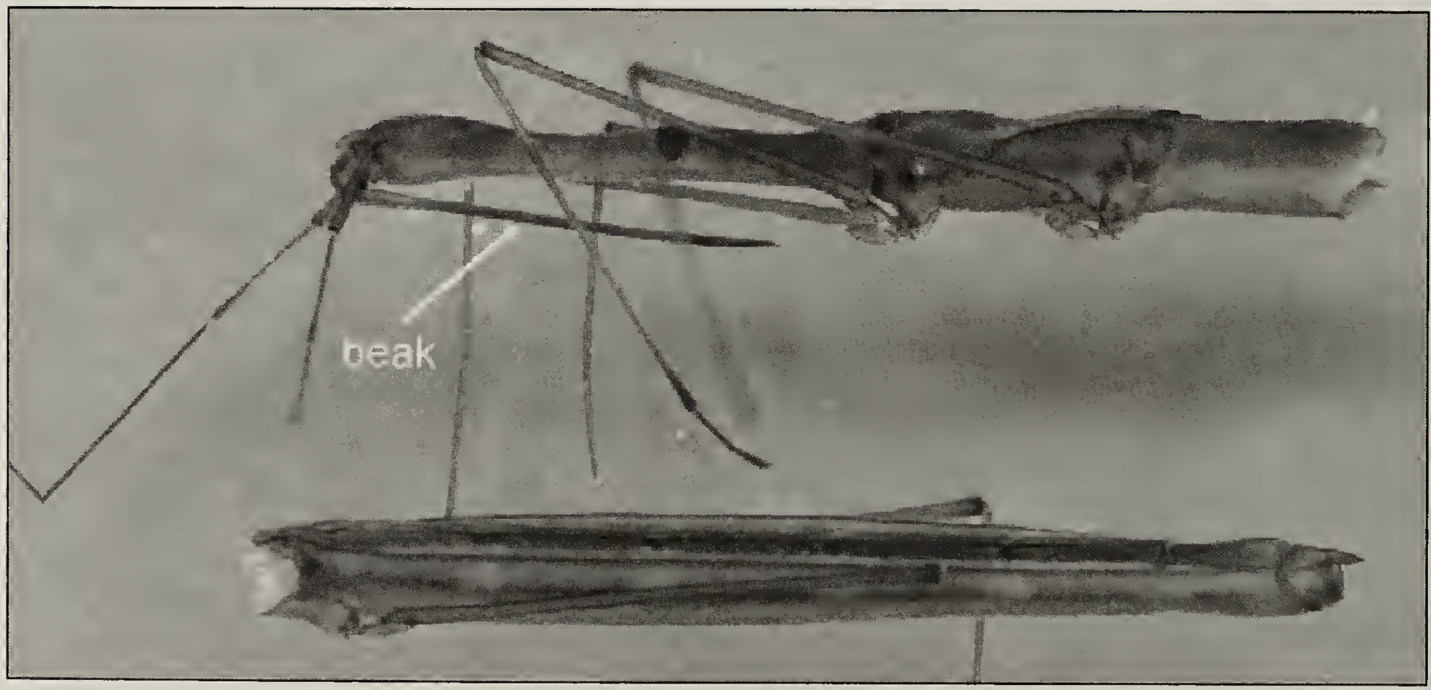

*Figure 4: Side view of marsh treader (*Hydrometra martini*) head and pro- and meso-thorax above, and meta-thorax and abdomen below. Elongated beak is indicated.*
D. Parker

an elongated piercing tube that is held back along the underside of the head. Marsh treaders are found in all types of permanent waters where they feed on small crustaceans (water fleas and seed shrimps) and aquatic insect larvae associated with the surface film.[12] The prey is pierced by the long slender beak and the body fluids are sucked out.[10] The life cycle includes five instars and takes about 21 days to complete.[12] There can be multiple generations in a year, with the adult being the overwintering stage.[12]

A single marsh treader specimen was collected in 1984 from a small, well-vegetated wetland in the vicinity of Waskesiu River (54° 04' 45" N; 105° 56' 21" W) (Figure 2). *H. martini* is the only species of Hydrometridae to occur in Canada. It has also been reported from British Columbia, Ontario and Nova Scotia.[8] In the United States, it has been recorded from the eastern states south to Florida, and from Minnesota, Texas, California and the two states bordering Saskatchewan: North Dakota and Montana.[2,6,14,15] Since only one specimen has been collected from Saskatchewan, no immigration route can be ascertained, but its presence well within the province suggests further sampling in eastern Saskatchewan should yield more specimens.

Conclusions

The collection of these three families increases the number of aquatic Heteroptera families recorded in Saskatchewan to eleven.

Sampling of Saskatchewan's aquatic habitats continues to yield new aquatic insect records and distribution information for the province. Results, such as those presented in this paper, are important in refining species distributions for the province, Canada and North America as a whole. As well, the information provides data for testing biogeography hypotheses, monitoring climate change-related species distribution shifts and determining potential waterways that invasive pest species may use to enter Saskatchewan, and possible monitoring methods for these species.

Representative specimens will be deposited in the Royal Saskatchewan Museum in Regina.

Acknowledgements

Funding for sampling at Red Deer River was provided through a grant to Nature Saskatchewan from SaskEnergy. Funding for Pipestone Creek sampling was provided by a Fish and Wildlife Development Fund grant from Saskatchewan Environment to the Saskatchewan Watershed Authority (SWA). SWA funded the remaining sampling in southern Saskatchewan. J. Halpin, K. Kirkham and C. Markel provided field assistance. C. McGuire provided *R. fusca* specimens from the fishponds.

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CHECKLIST OF SASKATCHEWAN MOTHS: PART 18-GEOMETRIDAE (4), LARENTIINAE

RONALD R. HOOPER, Box 757, Fort Qu'Appelle, SK S0G 1S0

This is the completion of the list of Saskatchewan geometrid moths. The first geometrid article was published in *Blue Jay*, Volume 64, Number 2.

Unless otherwise indicated, all the species are represented in the Royal Saskatchewan Museum collection in Regina. The species are arranged according to the website of Jim Troubridge and Don Lafontaine, The Moths of Canada,[6] with updates to 2006 provided to the author by Greg Pohl. This website also has colour photographs of the moths. The preferred food plants that are listed are primarily based on Prentice.[4] The common names that are used are mostly according to J. R. J. L. Jones and C. V. Covell, Jr..[2,3] Recent scientific name changes are according to M. J. Scoble.[5]

In this article, the size and early and late dates of Saskatchewan specimens are given. Abbreviations: s=south, n=north, w=west, e=east, CNC=Canadian National Collection in Ottawa, RSM=Royal Saskatchewan Museum in Regina.

Subfamily LARENTIINAE

Many moths of this group have wavy designs of black and white, or brown and white, and are called Carpets. The pattern of many of them would indeed make a beautiful design for a carpet. The Scallop Shell Moth is nicely marked with many parallel wavy lines like a sea shell. The Spear Mark and White-banded Black have a white marking shaped like a spear point along the outer edge of the forewing. (Figure 1)

The largest genus, *Eupithecia*, contains the Pugs, which are among our smaller species in the family. Some have a wingspread of only 13 mm and can easily be mistaken for microlepidoptera. There are 62 species in this genus in Canada; they were treated in detail by Bolte.[1]

Some species of Larentiinae in the genera *Dysstroma, Hydriomena, Eupithecia* and *Rheumaptera* are difficult to identify, and often require examination of genitalic structures.

Dark Marbled Carpet *Dysstroma citrata* (Linnaeus) - S. Sask., n. to Geikie River (near Wollaston Lake). (24-29 mm) (June 21-August 23) Reported on willow.

Marbled Carpet *Dysstroma truncata* (Hufnagel) - S. Sask., n. to Cumberland House, Anglin Lake and Loon Lake. (27-32 mm) (July 8-Sept.2) Food plant records are confused with those of Walker's Carpet.

Walker's Carpet *Dysstroma walkerata* (Pearsall) - Baldy Lake (Hanson Lake Road). (29 mm) (August 3) Food plant records are confused with those of Marbled Carpet.

Orange-barred Carpet *Dysstroma hersiliata* (Guenée) - S. Sask., n. to Gordon Lake. (25-29 mm) (June 11-July 19) Reported on currant.

Rutland Carpet *Dysstroma rutlandia* McDunnough - Fort Qu'Appelle and Rutland. (26 mm) (July 18).

Graceful Carpet *Dysstroma formosa* (Hulst) - Reported for Sask. by Troubridge and Lafontaine.[6]

Brown Carpet *Dysstroma brunneata* (Packard) - Reported for Sask. by Troubridge and Lafontaine.[6] Reported on gooseberry.

Gracefully-lined Carpet *Eulithis gracilineata* (Guenée) - Fort Qu'Appelle and Regina. (31-32 mm) (July 18-Sept.) Reported on Virginia creeper.

Barred Yellow *Eulithis propulsata* (Walker) - S. Sask., n. to Nakweaga Bay, Wollaston Lake. (28-34 mm) (July 11-August 22) Reported on currant.

The Chevron *Eulithis testata* (Linnaeus) - S. Sask., n. to Geikie River (near Wollaston Lake). (26-31 mm) (July 19-Sept.7) Reported on willow.

Banded Gray *Eulithis destinata schistacea* Warren - Central Sask., n. to Umperville River (near Wollaston Lake); s. to Earl Grey. (25-27 mm) (August 5-23) Reported on willow.

Pointed-winged Eulithis *Eulithis flavibrunneata* (McDunnough) - Central Sask., n. to Shoal Lake and Harlan (n.e. of Lloydminster); s. to Fort Qu'Appelle and Earl Grey. (25-31 mm) (August 3-Sept. 13) Reported on willow and aspen.

White Eulithis *Eulithis explanata* (Walker) - Central Sask., n. to Collins Creek (near Wollaston Lake) and Key Lake; s. to White Bear Lake (n. of Carlyle) and Fort Qu'Appelle. (29-34 mm) (July 4-August 20) Reported on blueberry.

The Phoenix *Eulithis xylina* (Hulst) - Fort Qu'Appelle, Punnichy, Duck Lake and La Ronge. (29-32 mm) (July 11-August 16) Reported on willow.

Clouded Brown *Eustroma semiatrata* (Hulst) - Johnson River (near Wollaston Lake). (29 mm) (August 14) Reported on willowherb.

Small Phoenix *Ecliptoptera silaceata albolineata* Packard -Wildcat Hill Wilderness Area, Big River and Cypress Hills Interprovincial Park (Centre Block). (25-26 mm) (June 14-July 8) Reported on touch-me-not and willowherb.

George's Carpet *Plemyria georgii* Hulst - Big River, Beauval area and Harlan (n.e. of Lloydminster). Reported on alder, willow and birch.

Juniper Carpet *Thera juniperata* (Linnaeus) - Regina. (24 mm) (Oct. 30) Introduced from Europe, and associated in western Canada with ornamental juniper.

Scarce Highflyer *Hydriomena perfracta* Swett - Punnichy, Big River and Meadow Lake. (30-31 mm) (May 14-June 11) Reported on aspen and tamarack.

Black-dashed Hydriomena *Hydriomena divisaria frigidata* (Walker) - S. Sask., n. to Weekes, Chelan and Prince Albert. (28-29 mm) (May 24-July17) Reported on white spruce, balsam fir and tamarack.

Renounced Hydriomena *Hydriomena renunciata* (Walker) - N. Sask., s. to Tantallon. (26-29 mm) (June 14-July 10) Reported on alder and spruce.

Ruby-tinted Highflyer *Hydriomena ruberata* (Freyer) - Central Sask., n. to Wadena and Meadow Lake; s. to Maryfield and Regina. (27-29 mm) (May 14-July 30) Reported on willow.

Common Highflyer *Hydriomena furcata* (Thunberg) - S. Sask., n. to Otter Rapids. (26-31 mm) (June 11-August 17) Reported on willow.

Brown Tissue *Triphosa haesitata* (Guenée) - Central Sask., n to Narrow Hills Provincial Park; s. to Fort Qu'Appelle. (32-37 mm) (April 26-July; August 12-Oct.15) Reported on buckthorn and hawthorn. (Worn specimens that have overwintered as adults appear in spring; fresh adults emerge in late summer.)

Barberry Geometer *Coryphista meadii* (Packard) - Halbrite and Rockglen. (34-36 mm) (June 5-30) Reported on barberry. (Our specimens are worn. They are probably strays).

Scallop Shell Moth *Rheumaptera undulata* (Linnaeus) - Throughout Sask. (24-37 mm) (June 15-August 10) Reported on willow and aspen.

Spear Mark *Rheumaptera hastata* (Linnaeus) - N. Sask., s. to Maryfield, Regina and Pike Lake. (21-31 mm) (June 3-July 12) Reported on birch, alder, willow and bog myrtle.

White-banded Black *Rheumaptera subhastata* (Nolcken) - N. Sask., s. to Duck Mountain Provincial Park and Raymore. (20-30 mm) (June 14-July 2) Reported on alder, birch and willow.

Marbled Slate *Entephria multivagata* (Hulst) - Reported for Sask. by Troubridge and Lafontaine.[6] Reported on White Spruce.

Red-fringed Carpet *Mesoleuca ruficillata* (Guenée) - Central Sask., n. to Sturgeon Landing and Meadow Lake Provincial Park; s. to Maryfield and Fort Qu'Appelle; also in Cypress Hills Interprovincial Park (Centre Block). (25-28 mm) (May 22-June 28) Reported on birch.

Double-banded Carpet *Spargania magnoliata* Guenée - Narrow Hills Provincial Park, Big River and Cypress Hills Interprovincial Park (Centre Block). (24 mm) (July 17) Reported on willowherb.

White-barred Black *Spargania luctuata* ([Denis & Schiffermüller]) - Wallwort, Big River and Cypress Hills Interprovincial Park (Centre Block). (24-25 mm) (June 14-July 5) Reported on willowherb and bedstraw.

Square-patched Carpet *Perizoma basaliata* (Walker) - Big River. (18 mm) (July 18-August 15)

Southern Carpet *Perizoma custodiata* (Guenée) - Fort Qu'Appelle, Grasslands National Park (East and West Blocks) and Val Marie. (20-26 mm) (May 26-August 24).

Brindled Wave *Anticlea vasiliata* Guenée - Bainbridge (n. of Hudson Bay), Dore Lake, Meadow Lake and Cypress Hills Interprovincial Park (Centre Block). (23-29 mm) (May 14-June 2) Reported on raspberry.

Many-lined Carpet *Anticlea multiferata* (Walker) - N. Sask., s. to Kamsack and Meadow Lake Provincial Park. (22-25 mm) (May 31-June 25) Reported on willowherb.

Topaz Carpet *Stamnodes topazata* (Strecker) - Kamsack and Bjorkdale. (22-24 mm) (May 13)

Pink-banded Carpet *Xanthorhoe labradorensis* (Packard) - Central Sask., n. to Nipawin Provincial Forest (e. of Nipawin); s. to Roche Percee and Fort Qu'Appelle. (19-25 mm) (June 11-July 18) Reported on plants in the mustard family.

Packard's Carpet *Xanthorhoe packardata* McDunnough - White Bear Lake Resort (n. of Carlyle), Fort Qu'Appelle and Buffalo Narrows. (19-25 mm) (June 12-July 17) Reported on alyssum.

Northern Carpet *Xanthorhoe abrasaria* (Herrich-Schäffer) - N. Sask., s. to Weekes and Loon Lake; also in Cypress Hills Interprovincial Park (Centre Block). (22-25 mm) (July 7-August 15).

Broken-banded Carpet *Xanthorhoe iduata* (Guenée) - Preeceville (24 mm) (June 23).

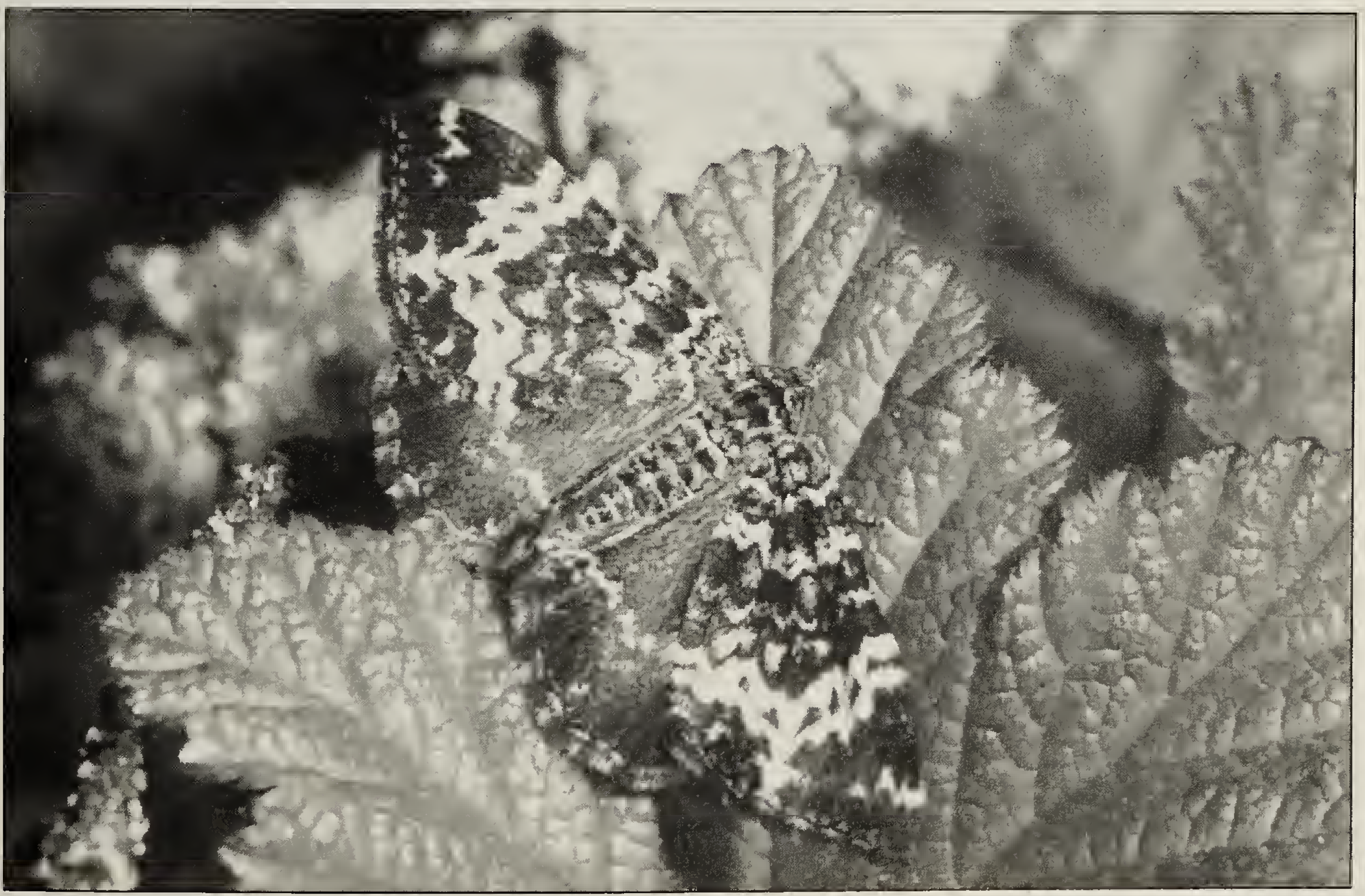
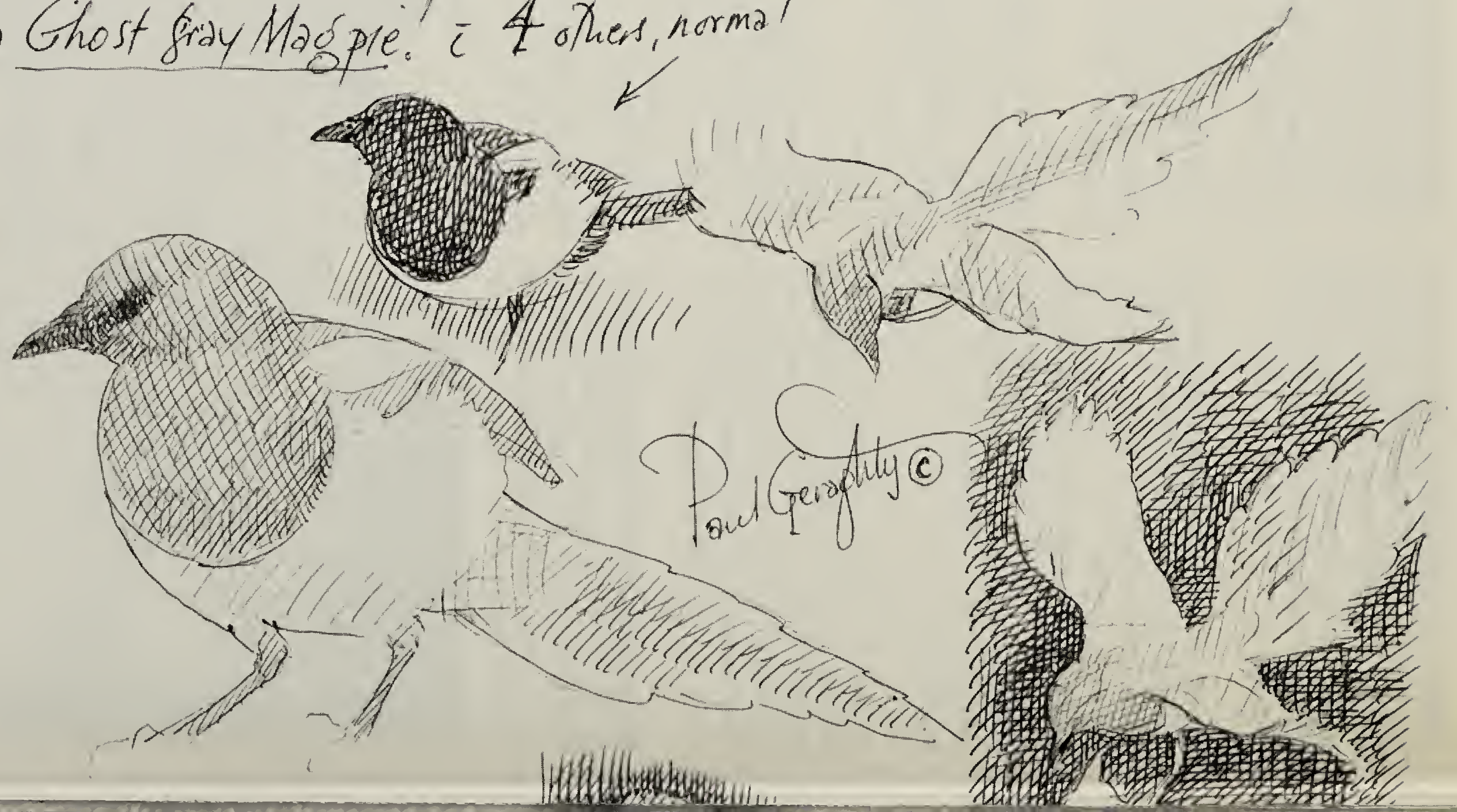
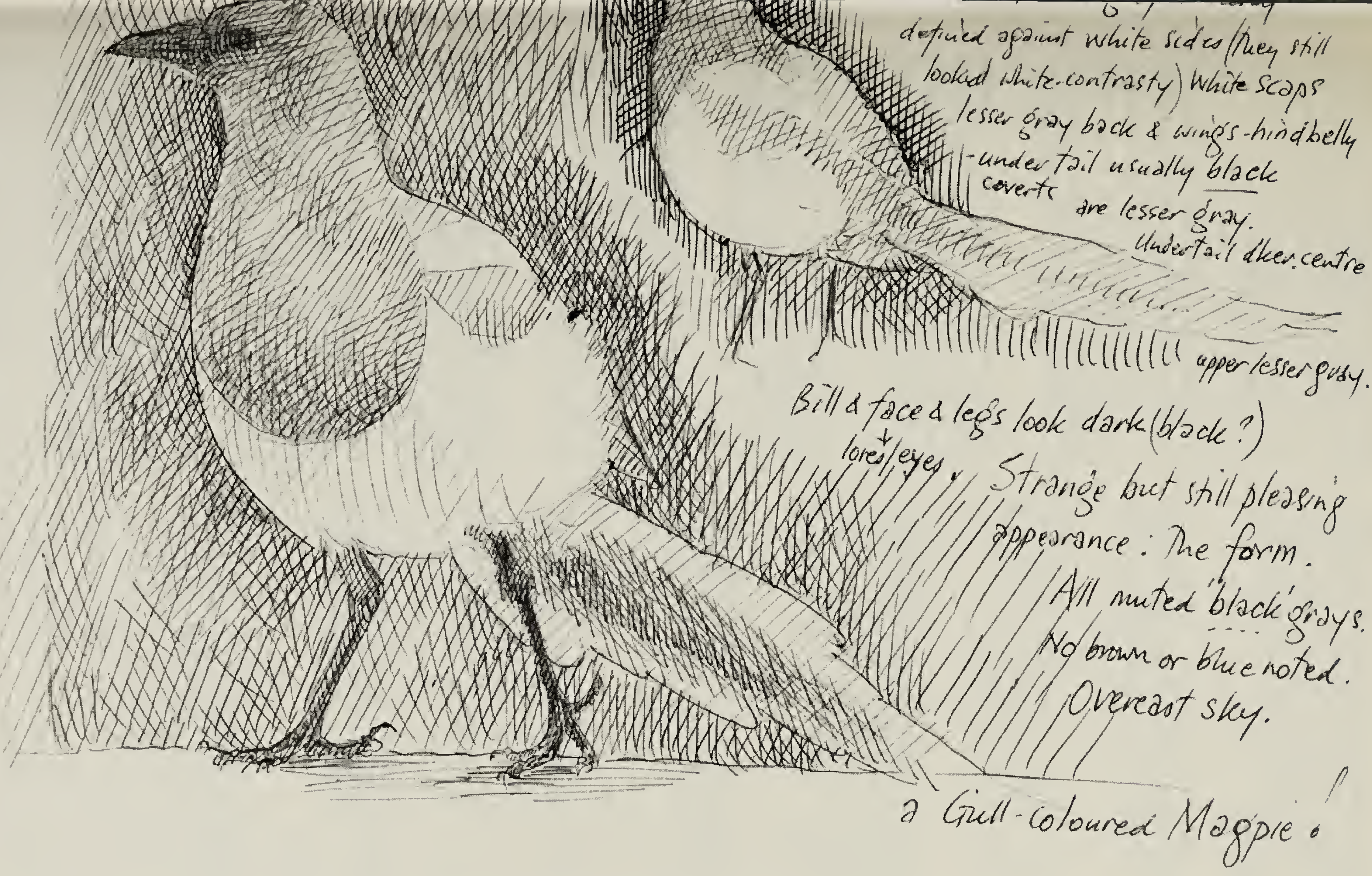


Figure 1. Spear Mark at Patterson Lake, SK *Ron Hooper*



Sep 22/02 MJDam p.m.
2 Ghost gray Magpie! c̄ 4 others, normal!

Paul Geraghty ©


defined against white sides (they still
looked white-contrasty) White scaps
lesser gray back & wings-hindbelly
-undertail usually black
coverts are lesser gray.
Undertail dker. centre
upper lesser gray.
Bill & face & legs look dark (black?)
lores/eyes.
Strange but still pleasing
appearance: The form.
All muted 'black' grays.
No brown or blue noted.
Overcast sky.
a Gull-coloured Magpie!

Arctic Carpet *Xanthorhoe ramaria delectaria* Cassino & Swett - Patterson Lake (n.e. corner of Sask.). (23-25 mm) (June 25-27) Reported on Dry-ground Cranberry.

Brown-banded Carpet *Xanthorhoe algidata* (Möschler) - Wadena, Wildcat Hill Wilderness Area and Gordon Lake. (20-26 mm) (July 14-Oct. 6)

Chalky Carpet *Xanthorhoe pontiaria* Taylor - Reported for Sask. by Troubridge and Lafontaine.[6]

Red Carpet *Xanthorhoe decoloraria* (Esper) - N. Sask., s. to Duck Mountain Provincial Park. (20-24 mm) (June 14-August 15) Reported on stitchwort, groundsel, willowherb and geranium in Europe.

Twin-spot Carpet *Xanthorhoe ferrugata* (Clerck) - Throughout Sask. (20-22 mm) (May 11-August 7) Reported on dandelion, polygonum and stitchwort.

Toothed Brown Carpet *Xanthorhoe lacustrata* (Guenée) - Throughout Sask. (20-26 mm) (May 1-Sept. 16). Reported on birch, raspberry, hawthorn and willow.

Striped Carpet *Epirrhoe alternata* (Müller) - Throughout Sask. (20-25 mm) (June 18-August 17) Reported on bedstraw.

Orange-winged Carpet *Epirrhoe plebeculata* (Guenée) - S. Sask., n. to Fort Qu'Appelle and Saskatoon. (18-20 mm) (April 21-May17).

Small Argent and Sable *Epirrhoe sperryi* Herbulot - S. Sask., n. to Chemong, Candle Lake and Peerless. (18-20 mm) (May 29-June 25) Reported on bedstraw.

The Intermediate *Euphyia intermediata* (Guenée) - Throughout Sask. (21-26 mm) (June 13-July 14) Reported on chickweed, elm, forget-me-not and mustard.

Wood-colored Carpet *Zenophleps lignicolorata* (Packard) - Central Sask., n. to Deschambault Lake and Meadow Lake Provincial Park; s. to Fort Qu'Appelle. (23-28 mm) (July 20-Sept.17) Reported on White Spruce.

Alpine Carpet *Zenophleps alpinata* Cassino - Buffalo Pound Provincial Park and Cypress Hills Interprovincial Park (Centre Block and West Block). (25-28 mm) (August 9-Sept.8).

The Gem *Orthonama obstipata* (Fabricius) - S. Sask., n. to Somme. (16-20 mm) (June 7-Sept.20) Reported on dock, elm and polygonum.

Bent-lined Carpet *Costaconvexa centrostrigaria* (Wollaston) - Fort Qu'Appelle and Avonlea. (19-21 mm) (June 21-October) Reported on knotweed and smartweed.

Fragile White Carpet *Hydrelia albifera* (Walker) - S. Sask., n. to Chemong and Turtle Lake. (16-18 mm) (June 16-July 30) Reported on dogwood.

The Welsh Wave *Venusia cambrica* Curtis - Central Sask., n. to Geikie River; s. to Wildcat Hill Wilderness Area. (23-24 mm) (June 25-August 15) Reported on alder and birch.

White-striped Black *Trichodezia albovittata* (Guenée) - N. Sask., s. to Duck Mountain Provincial Park and Sonningdale. (20-22 mm) (June 14-July 16) Reported on fireweed.

Bruce's Spanworm *Operophtera bruceata* (Hulst) - S. Sask., n. to

Reindeer Lake area. (23-30 mm) (April 6; Sept.29-Oct.24). This species is plentiful in late fall but rare in spring.

The Beggar *Eubaphe mendica* (Walker) - S. Sask., n. to Somme and Loon Lake. (26-27 mm) (June 15-July 22) Reported on maples and violets.

Many-lined Pug *Horisme intestinata* (Guenée) - S. Sask., n. to Narrow Hills Provincial Park. (21-26 mm) (June 15-July 18).

Two-tone Pug *Horisme incana* Swett - S. Sask., n. to Fort Qu'Appelle and Cramersburg (n. of Lancer). (25-27 mm) (June 4-August 12).

Ornate Pug *Eupithecia ornata* (Hulst) - Cypress Hills Interprovincial Park (Centre Block). (17-19 mm) (June 27) Reported on Lodgepole Pine.

Palpata Pug *Eupithecia palpata* Packard - Central Sask., n. to the Creighton and La Ronge areas; s. to Hudson Bay area, Gronlid area and Waskesiu. Reported on pine, fir and spruce.

Columbia Pug *Eupithecia columbiata* (Dyar) - Reported for Sask. by Troubridge and Lafontaine.[6] Reported on willow and chokecherry.

Beautiful Pug *Eupithecia stellata* (Hulst) - Central Sask., n. to Bjorkdale; s. to Fort Esperance and Fort Qu'Appelle. (20-22 mm) (June 11-Sept.5).

Subfuscate Pug *Eupithecia subfuscata* (Haworth) - Central Sask., n. to Wildcat Hill Wilderness Area and Meadow Lake Provincial Park; s. to Fort Qu'Appelle and Saskatoon. (19 mm) (July 7) Reported on willow, alder, poplar and birch.

Western Pug *Eupithecia lachrymosa* (Hulst) (=*Eupithecia georgii* McDunnough) - S.W. Sask., e. to Roche Percee and Fort Qu'Appelle; n. to Saskatoon. (17-19 mm) (May 29-July 21) Reported on birch, willow and alder.

Colored Pug *Eupithecia pygmaeata obumbrata* Taylor - Buffalo Narrows. (18 mm) (June 26).

Regina Pug *Eupithecia regina* Taylor - S. Sask., n. to Fort Qu'Appelle and Frenchman Butte. Regina is the type locality. (18 mm) (May 31).

Insignificant Pug *Eupithecia misturata* (Hulst) - Prince Albert, Smoothstone Lake and Green Lake areas. Reported on tamarack, chokecherry, spruce, willow and alder.

Cone-feeding Pug *Eupithecia mutata* Pearsall - Reported for Fort Qu'Appelle area. Reported in cones of spruce and fir.

Northern Pug *Eupithecia borealis* (Hulst) - Oxbow and Fort Qu'Appelle. (12-16 mm) (August 3-7).

Flower-feeding Pug *Eupithecia anticaria* Walker - S. Sask., n. to Sturgeon Landing and Harlan area (n.e. of Lloydminster). (14-16 mm) (June 6-July 8) Larvae reported on flowers of aster, Gaillardia and sunflower.

Chocolate Pug *Eupithecia ravocostaliata* Packard - Central Sask., n. to Cumberland House and Meadow Lake; s. to Oxbow area, Fort Qu'Appelle and Buffalo Pound Provincial Park. (22-25 mm) (May 14-July 8) Reported on willow, chokecherry, birch and aspen.

Tamarack Pug *Eupithecia lariciata* (Freyer) - Reported for central Sask., n. to Narrow Hills Provincial Park area and Meadow Lake Provincial Park area; s. to Duck Mountain Provincial Park area, and Harlan area (n.e. Lloydminster).

Kaslo Pug *Eupithecia casloata* (Dyar) - Throughout Sask. (16-18 mm) (June 11-July 18) Reported on spruce.

March Pug *Eupithecia annulata* (Hulst) - Central Sask., n. to Narrow Hills Provincial Park area and Dore Lake area; s. to Duck Mountain Park area, Archerwill area, Macklin area; also in Cypress Hills area. Reported on spruce, fir, pine, tamarack.

Three-spotted Pug *Eupithecia tripunctaria* Herrich-Schäffer - Wood Mountain Regional Park. (19-22 mm) (June 16) Reported on flowers and seeds of bush cranberry, cow parsnip and water hemlock.

Sheppard's Pug *Eupithecia sheppardata* McDunnough - Shoal Lake. (18 mm) (July 9) Reported on alder.

Alberta Pug *Eupithecia satyrata dodata* Taylor - Wildcat Hill Wilderness Area, Big River and Frenchman Butte area. (21 mm) (July 7) Reported on flowers and fruits of willowherb, sarsaparilla, meadow rue, raspberry and shrubby cinquefoil.

Composite Pug *Eupithecia absinthiata* (Clerck) - Fort Qu'Appelle, Earl Grey and Chaplin area. (22 mm) (August 26) On composite flowers such as yarrow, sunflower, aster, groundsel and sage.

Obscure Pug *Eupithecia nimbicolor* (Hulst) - Big River, Harlan area (n.e. of Lloydminster) and Maple Creek area. Reported on flowers of yarrow and willowherb, and leaves of willow, rose, Shrubby Cinquefoil and currant.

White Pug *Eupithecia cretaceata* (Packard) - Kamsack, Wadena, Moose Jaw area, Prince Albert area and Harlan area (n.e. of Lloydminster). (21-24 mm) (July 4-14)

Behren's Pug *Eupithecia behrensata* Packard - E. of Rosefield, Grasslands National Park (West Block) (Specimen in CNC).

Currant Pug *Eupithecia assimilata* Doubleday - Fort Esperance, Fort Qu'Appelle, Sturgeon Landing and Briercrest area. (16-19 mm) (June 22-29) Reported on currant.

White-lined Pug *Eupithecia russeliata* Swett - Central Sask., n. to Wildcat Hill Wilderness Area and Clearwater River Provincial Park; s. to Preeceville area and Meadow Lake Provincial Park. (16-19 mm) (June 14-July 7) Reported on laurel.

Prairie Pug *Eupithecia ammonata* McDunnough - Trossachs, Indian Head and Frenchman Butte.

Baneberry Pug *Eupithecia cimicifugata* Pearsall - Tantallon. (17 mm) (July 14) Reported on dogbane.

Smoky Pug *Eupithecia perfusca* (Hulst) - Fort Qu'Appelle, Saskatoon area and Harlan area. (18 mm) (Sept.2) Reported on willow, alder and birch.

Many-lined Pug *Eupithecia multistrigata* (Hulst) - Sask. Landing Provincial Park, Buffalo Narrows area and Milliken Lake. (19-21 mm) (August 10) Reported on alder.

Mountain Pug *Eupithecia gelidata* Möschler - Fort Qu'Appelle and Cypress Hills Interprovincial Park (Centre Block). (17-19 mm) (June 22-27) Reported on Labrador Tea, birch, alder and willow.

Bog Carpet *Carsia sororiata* (Hübner) - Central Sask., n. to Collins Creek; s. to Weekes. (22-24 mm) (August 11-19).

Black-angled Wave *Cladara limitaria* (Walker) - Central Sask., n. to Umperville River; s. to Hudson Bay area. (24-26 mm) (May 15-June 11) Reported on fir, spruce and tamarack.

Scribbler *Cladara atroliturata* (Walker) - Moose Mountain Provincial Park and Bainbridge Campsite (n. of Hudson Bay). (25-29 mm) (April 28-May 17) Reported on alder, birch and willow.

Powdered Bigwing *Lobophora nivigerata* Walker - Throughout Sask. (21-25 mm) (May 14-August 20) Reported on aspen and willow.

Three-patched Bigwing *Heterophleps refusaria* (Walker) - Reported for Sask. by Troubridge and Lafontaine.[6]

EXPECTED SPECIES

Bowman's Pug *Eupithecia bowmani* Cassino & Swett - Found on Manitoulin Island, Ontario and in central-west Alberta.

Lafontaine's Pug *Eupithecia lafontaineata* Bolte - Taken in western Canada, east to the southeastern corner of Alberta.

White-capped Pug *Eupithecia albicapitata* Packard - Found across Canada, on spruce cones.

Fletcher's Pug *Eupithecia fletcherata* Taylor - Known from eastern Canada, west to western Manitoba. Reported for Sask. but not confirmed by Bolte.[1]

Interrupted Pug *Eupithecia interruptofasciata* Packard - Across central Canada. The larvae feed on low juniper.

Juniper Pug *Eupithecia niphadophilata* (Dyar) - Known from western Canada, east to the Cypress Hills area of Alberta. The larvae feed on juniper.

Acknowledgments

I thank Klaus Bolte of Ottawa for checking the identification of most of our geometrid specimens. I also thank Greg Pohl of Edmonton for checking this manuscript and giving helpful suggestions.

1. BOLTE, K. B. 1990. Guide to the Geometridae of Canada, (Lepidoptera). VI. Subfamily Laretiinae. 1. Revision of the genus *Eupithecia*. Memoirs of the Entomological Society of Canada 151.

2. COVELL, C. V., Jr. 1984. A Field Guide to the Moths of Eastern North America. Houghton Mifflin, Boston. (Well illustrated).

3. JONES, J. R. J. L., 1951. An annotated check list of the Macrolepidoptera of British Columbia. Entomological Society of British Columbia Occasional Paper No. 1.

4. PRENTICE, R. M. 1963. Forest Lepidoptera of Canada: Recorded by the Forest Insect Survey. Vol. 3. Canada Department of Forestry Bulletin 1013, Ottawa.

5. SCOBLE, M. J. (Ed.) 1999. A Taxonomic Catalogue of the Geometridae of the World. 2 vols., CSIRO publications, Melbourne.

6. TROUBRIDGE, J. and D. LAFONTAINE, The Moths of Canada. http://www.cbif.gc.ca/spp_pages/misc _moths/phps/mothindex_ e.php

UNUSUAL BEHAVIOUR INVOLVING MOURNING CLOAK BUTTERFLIES

PETER TAYLOR, P.O. Box 597, Pinawa, MB R0E 1L0. E-mail: <taylorp@granite.mb.ca>

The Mourning Cloak's large size, unique wing pattern, nationwide distribution, and long flight period make it one of the most familiar Canadian butterflies. During 2007, I twice observed unusual behaviour involving Mourning Cloaks in southeastern Manitoba (near 50°N, 96°W): once as the object of courtship of another butterfly species, and once in an unusual feeding situation. The dates correspond to the normal spring and midsummer flight periods for this species in the area.

At about 4 p.m. on 15 April, while driving slowly along a gravel road northwest of Pinawa, I saw a Mourning Cloak and a Milbert's Tortoiseshell together at a small, wet spot on the roadway. Stopping for the photo opportunity, I was struck by how close the tortoiseshell stayed to the Mourning Cloak. When they flushed, it flew about 30 cm behind its larger relative, following every zig and zag, then landed close by and edged up behind it until almost touching (Fig. 1). It was not just a case of both being attracted to the same spot in the road; the tortoiseshell was evidently attracted to the Mourning Cloak.

I thought at first that the tortoiseshell sought the larger, dark-coloured butterfly for warmth and shelter on a relatively cool (about 15°C), breezy afternoon. A more anthropomorphic thought was that they were "buddies", newly emerged from hibernation, enjoying the first warmth of spring together. I then realized that the behaviour was similar to that of a courting pair of Milbert's Tortoiseshells I had photographed near Pinawa on 27 June 2006 (Fig. 2). Most likely this was an example of interspecific courtship, perhaps prompted by the absence of an appropriate mate on a day with little butterfly activity at the very beginning of the flight period. Courtship between different butterfly species, sometimes not even closely related, is apparently "encountered surprisingly frequently in field work with butterflies", though seldom reported.[1-3] In this instance the butterflies belonged to the same genus, *Nymphalis*.

The second observation was at a gravel road near the Canadian Pacific Railway main line between Whitemouth and Rennie at about 3 p.m. on 15 July. There, I was enjoying a combination of picking berries, photographing butterflies, and watching freight trains roll by. A Mourning Cloak caught my attention when it landed on the sunlit rear tire of my van. At first this seemed to be just a warm, sheltered spot to bask. On closer observation, however, the butterfly appeared to be feeding on the surface of the tire (Fig. 3). It then sidled into the shade of the wheel well and continued to feed by probing in the grooves of the tire treads.

There was no visible moisture on the tire; the gravel road was mainly dry, and the van had been parked for over an hour in sunny, breezy conditions. Mourning Cloaks are generally described as sap feeders, and like many butterfly species they are also

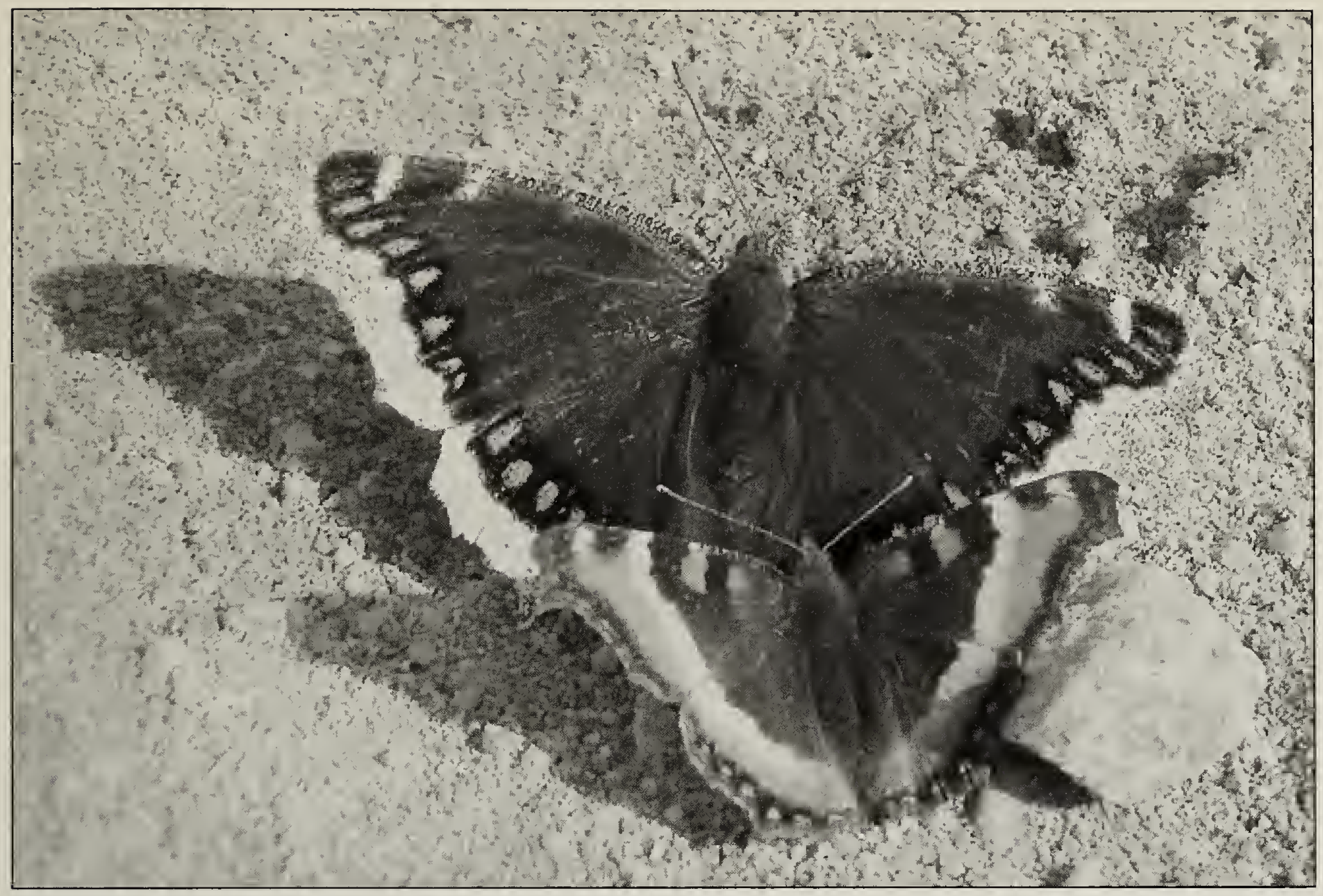


Figure 1 *Peter Taylor*

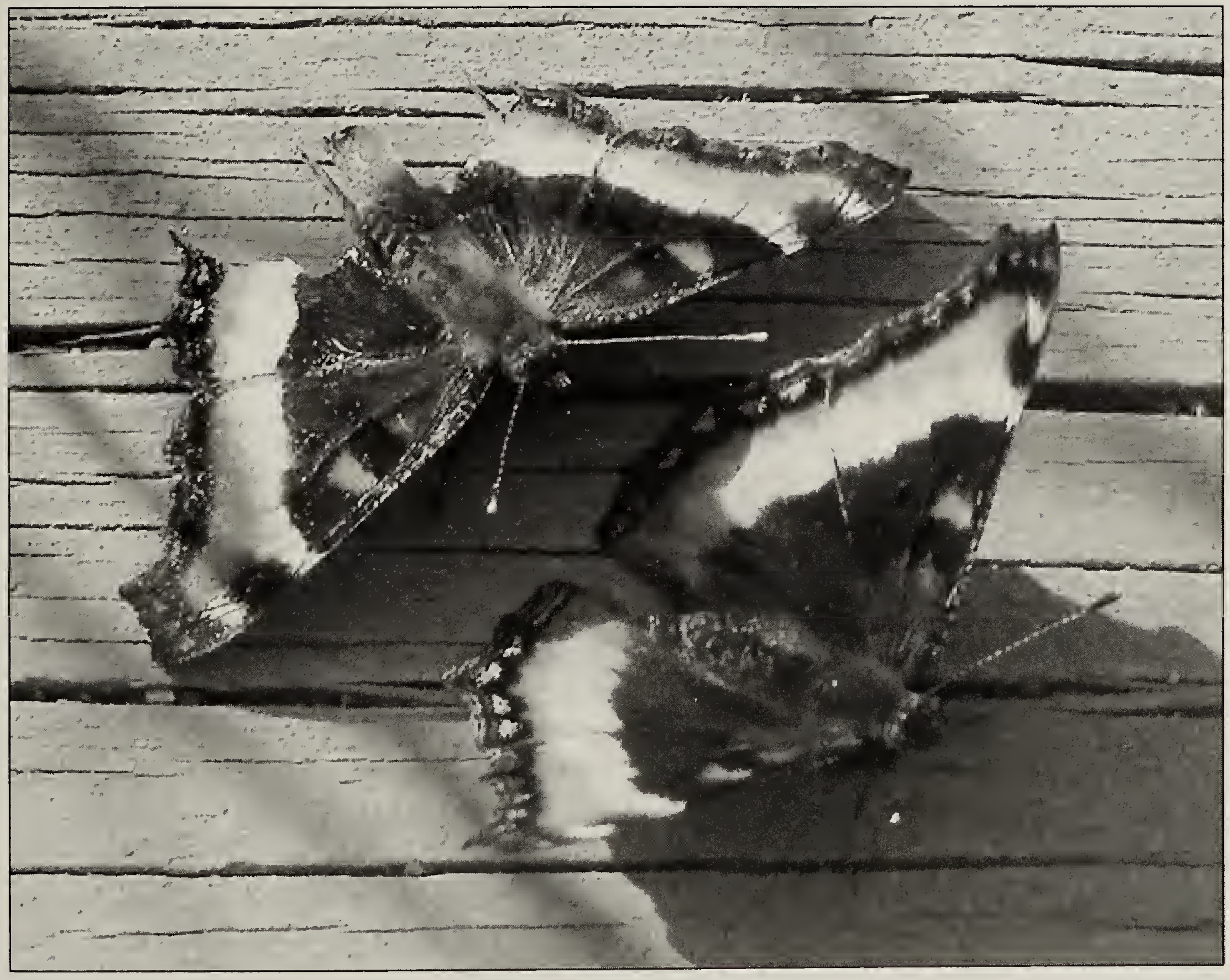


Figure 2 *Peter Taylor*

known to feed on decaying organic material such as carrion, dung, and rotting fruit. One can only imagine what traces of edible matter, or perhaps salt, the butterfly was finding in this unusual feeding niche.

1. SHAPIRO, A.M. 1973. An interfamilial courtship (Nymphalidae, Pieridae). *Journal of Research on the Lepidoptera* 11:197-198.

2. SHAPIRO, A.M. 1981. An interfamilial courtship (Lycaenidae, Pieridae). *Journal of Research on the Lepidoptera* 20:54.

3. SHAPIRO, A.M. 1985. An intersubfamilial courtship (Lycaenidae). *Journal of Research on the Lepidoptera* 24:195.

NOTE: Articles published in *Journal of Research on the Lepidoptera* can be viewed online at: http://www.doylegroup.harvard.edu/~carlo/JRL/jrl.html

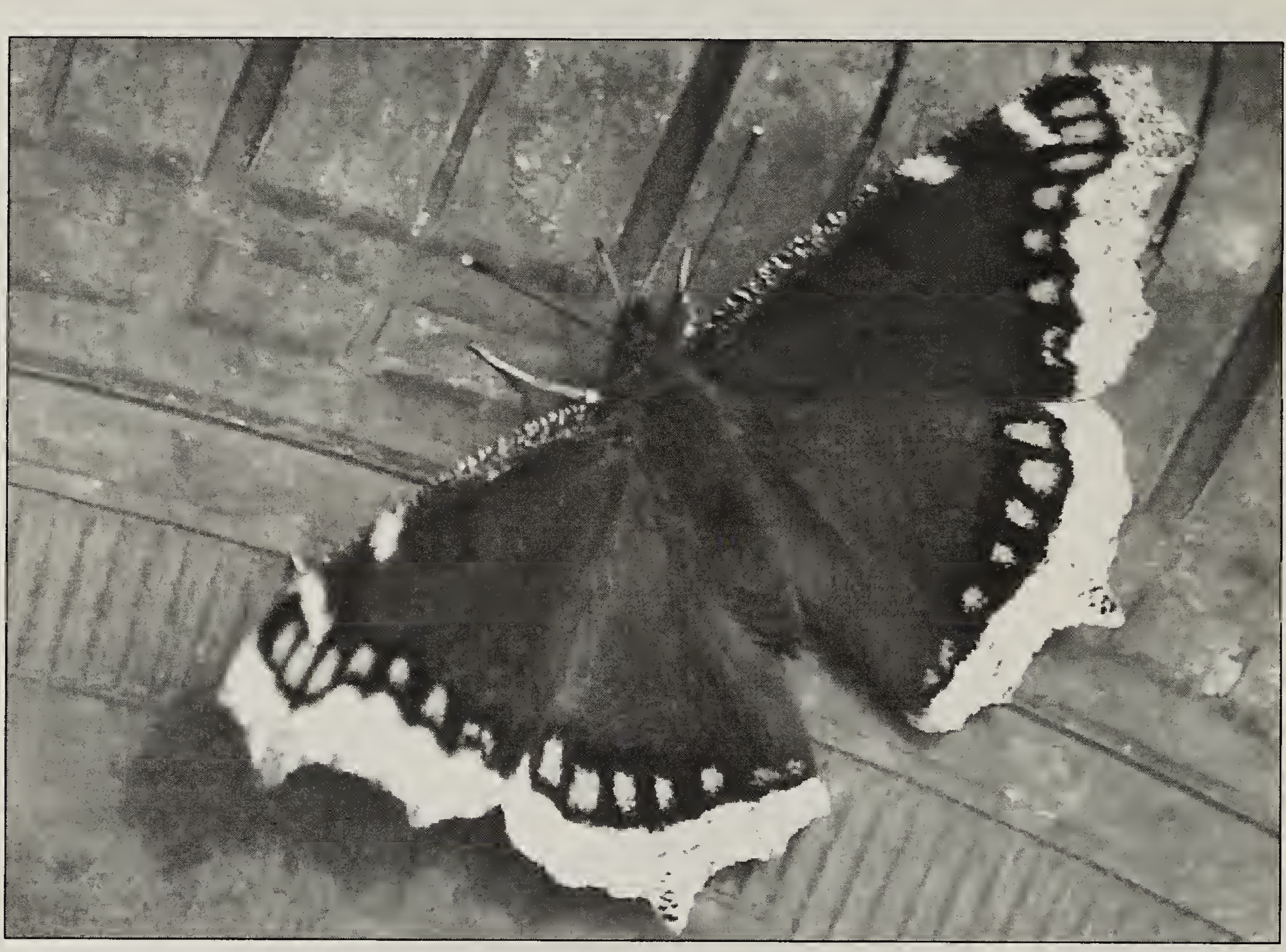


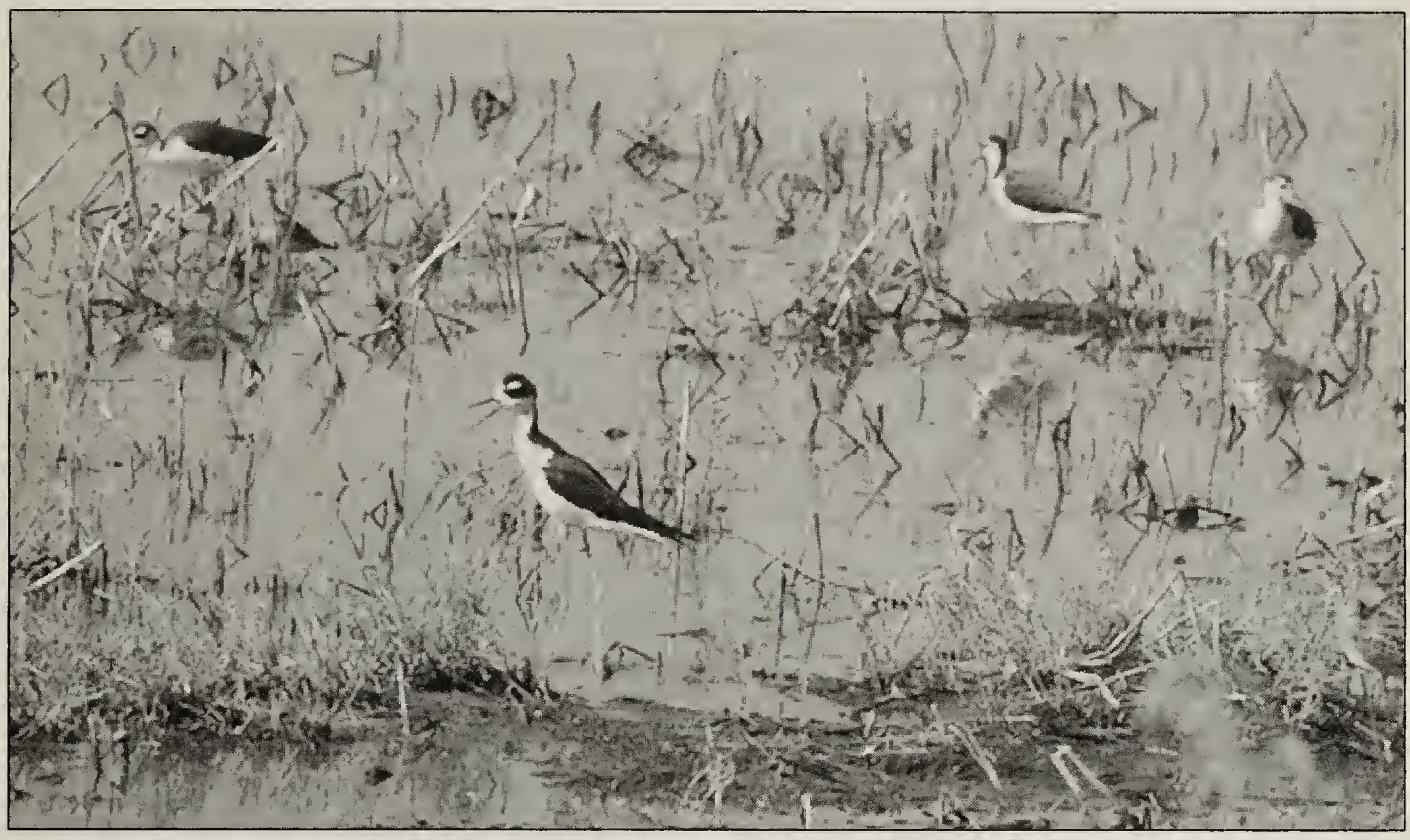
Figure 3 Peter Taylor

* * *

"When I walk now I bring home a harvest of burs and stick-tights on my trouser legs and socks. Even a brief walk at the roadside or in the pasture gathers half a dozen different kinds. Plucking them off, I marvel at the variety of ingenious ways a seed can hitch a ride."
Hal Borland, *Beyond Your Doorstep*, p. 349.

NOTES AND LETTERS

BLACK-NECKED STILT FAMILY AT LAURA, SK



Three young (background) and one adult (foreground) Black-necked Stilts near Laura on 23 July, 2007 *George Tosh*

A family of two adult Black-necked stilts and four young was spotted in a slough just east of Laura, SK by Tom Lawton of Delisle, July 22, 2007. George Tosh photographed the stilts the next day.The above photograph shows three well-developed young in the background with one adult closest to the photographer. The young differ little from adults in body size, but note the brown backs and the much shorter, less colorful legs visible in the photograph on the inside front cover.

These photos document the third breeding record of Black-necked Stilts in the Saskatoon Bird Area.[1] In 1987, a pair of stilts was first noted on May 30 in a shallow slough at the north end of Blackstrap Reservoir; a nest containing four eggs was observed on June 9, but a short time later the eggs were predated and the birds left the area. Two years later, in June, 1989, a pair successfully nested on an island in a big slough just west of Bradwell Reservoir. Three chicks survived throughout July; only two fully grown young remained when the family group was last seen on August 18. Incidentally, another likely indication of breeding in the area was Michael Gollop's sighting of three flying young near Blucher, August 10, 1989.

To date there has been no indication of stilts nesting farther north in Saskatchewan than the Saskatoon Bird Area.

1. LEIGHTON, A. L., J. HAY, C. S. HOUSTON, J. F. ROY and S. SHADICK. 2002. Birds of the Saskatoon Area. Special Publication No. 23, Saskatchewan Natural History Society, Regina

- *J. Frank Roy*, 912-606 Victoria Avenue, Saskatoon, SK S7N 0Z1

BLACK-CAPPED CHICKADEES FEED ON SPIDERS

On 25 March 2007, I was birding near the duck pond in Assiniboine Park in Winnipeg. A chain link fence about 80 cm tall and situated inside a paved trail, surrounds the pond. A pair of Black-capped Chickadees were actively feeding along the top of the fence ahead of me. The temperature was about 5° C on a sunny morning with a light wind. About 30 cm of snow remained on the ground. The pond was frozen.

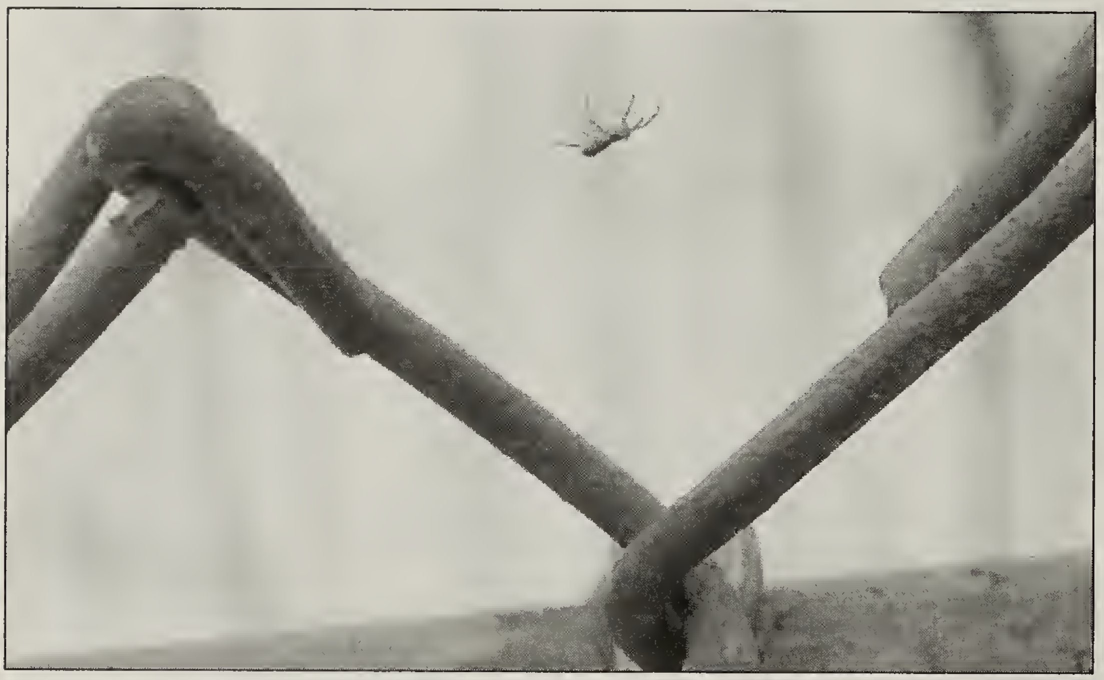


Figure 1. Spider on chain link fence where chickadees were feeding on 25 March 2007 *Tom Reaume*

As I reached the place where the chickadees were feeding, nothing was visible. I knelt, and after about half a minute, I was surprised to find a small brown spider on the wire. More searching revealed more spiders, some were on webs between the top triangles of wire above the horizontal bar. Some were actively traveling on their webs between adjacent triangles (Figure 1). The bodies of the spiders were 2–2.5 mm long.

Several specimens were collected the next day. I contacted Terry Galloway, an entomologist at the University of Manitoba and he passed the specimens on to Anita Stjernberg, who was kind enough to look at them. Because they were all juveniles, no identification to genus was possible. However, one specimen was a running crab spider (family Philodromidae). The others were orb-weavers (family Araneidae). The specimens were placed in the collection of the J. B. Wallis Museum at the Department of Entomology at the University of Manitoba.

The spiders were not noticed on the fence on subsequent visits, nor were chickadees observed feeding along the fence. Black-capped Chickadees are known to feed on spiders as well as caterpillars, beetles, moths, ants, insect eggs, plant lice, wild fruit, seeds and suet.[1]

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[1] JAMES, R. 1979. *Glen Loates Birds of North America*. Cerebrus Publishing Company, Prentice-Hall of Canada, Scarborough, ON.

- *Tom Reaume*, 212 Sherburn St.,
Winnipeg, MB R3G 2K6

Editor's Note: Quite a number of species of spiders and insects are active under deep snow in the winter. In some habitats, on sunny days with above zero temperatures, and most commonly in early spring, but occasionally in early winter, spiders will emerge and wander around on the snow surface and on vegetation.

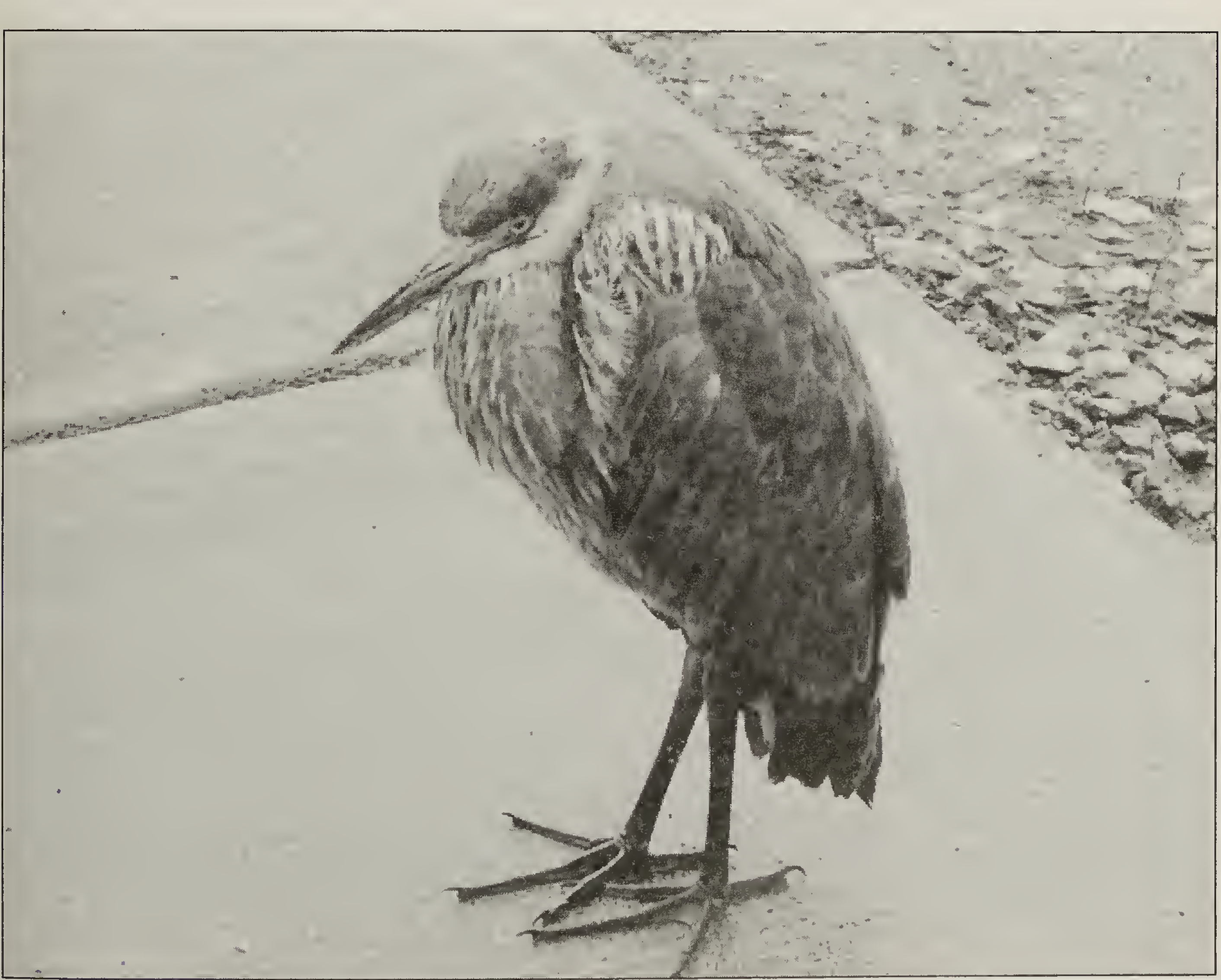
TURKEY VULTURES ON PASQUA LAKE

On June 6, 2007, I watched a group of eight Turkey Vultures through my telescope. This is the only sizable aggregation of this species that I have ever seen. They were perched on the south shore of the west end of Pasqua Lake, west of Fort Qu'Appelle, SK and appeared to be watching the carcass of an American White Pelican just offshore. Individual members would fly over this carcass at close range, then be splashed by a wave and retreat back to shore. Clearly none wished to risk getting wet. The carcass did not reach shore and after at least ninety minutes they all flew away. Later that evening, the pelican washed up. The vultures returned and it was eaten in no time. On June 9 about 9.30 a.m., I counted 14 Turkey Vultures at the same location, spreading their wings, perhaps to warm up.

- *Brendan Balon*, PO Box 2456, Fort Qu'Appelle, SK S0G 1S0

TRANSFORMATION

One chilly and drizzly day in June 2006, Melanie Freeston glanced out a kitchen window and saw an odd, cartoon-like bird standing on the walkway. Melanie and her husband live in the Neilburg area where they have quite a lot of wildlife coming near their house. The grumpy-looking bird stood around in the vicinity of the house most of the day.



What is this odd, cartoon-like bird? *Melanie Freeston*

The Great Blue Heron becomes stately when the skies clear *Melanie Freeston*

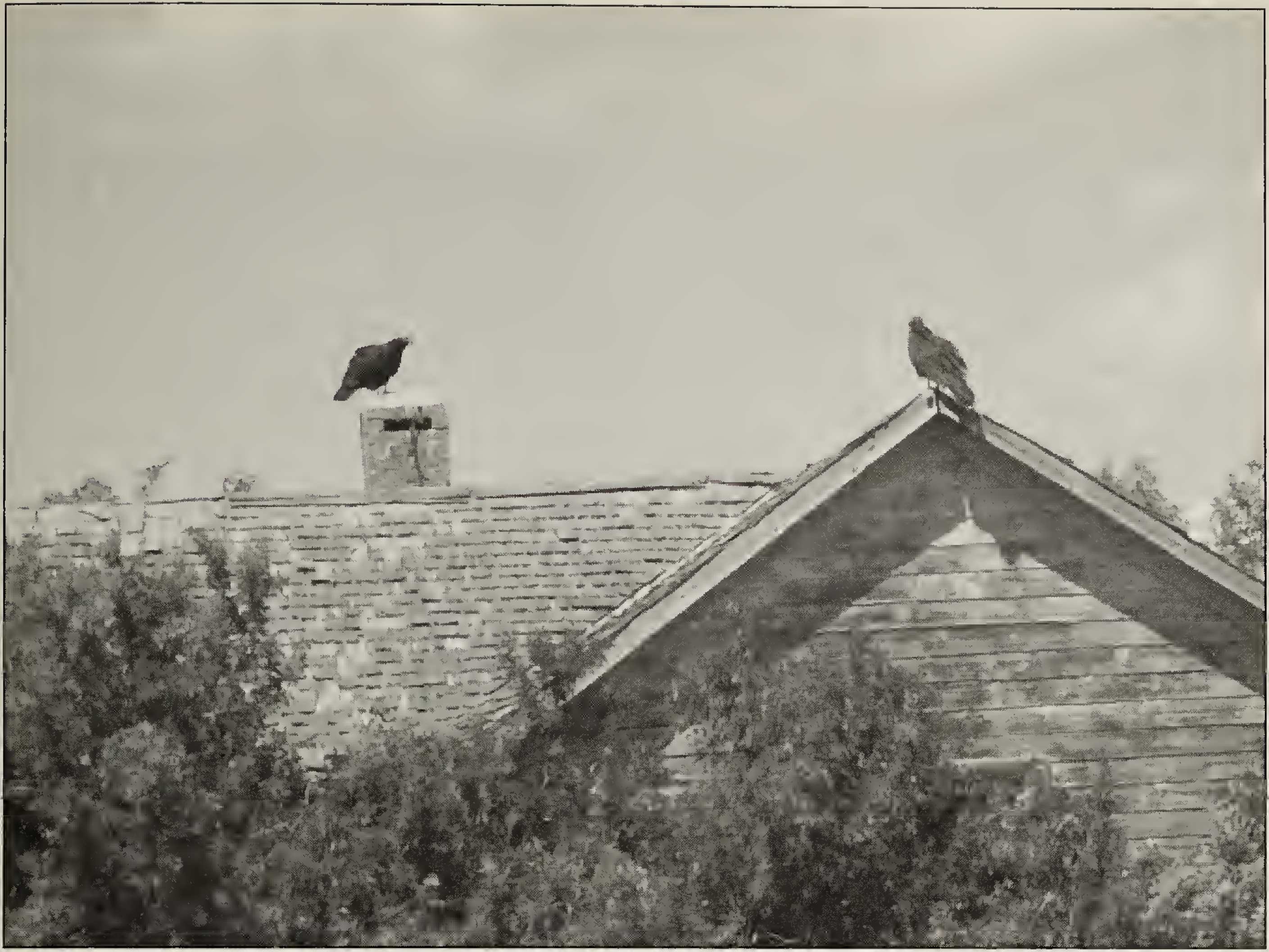
When the skies began to clear, it turned into a stately Great Blue Heron and left for parts unknown.

- *Christine Pike*, Strathdene Farm, Box 97, Waseca, SK S0M 3A0

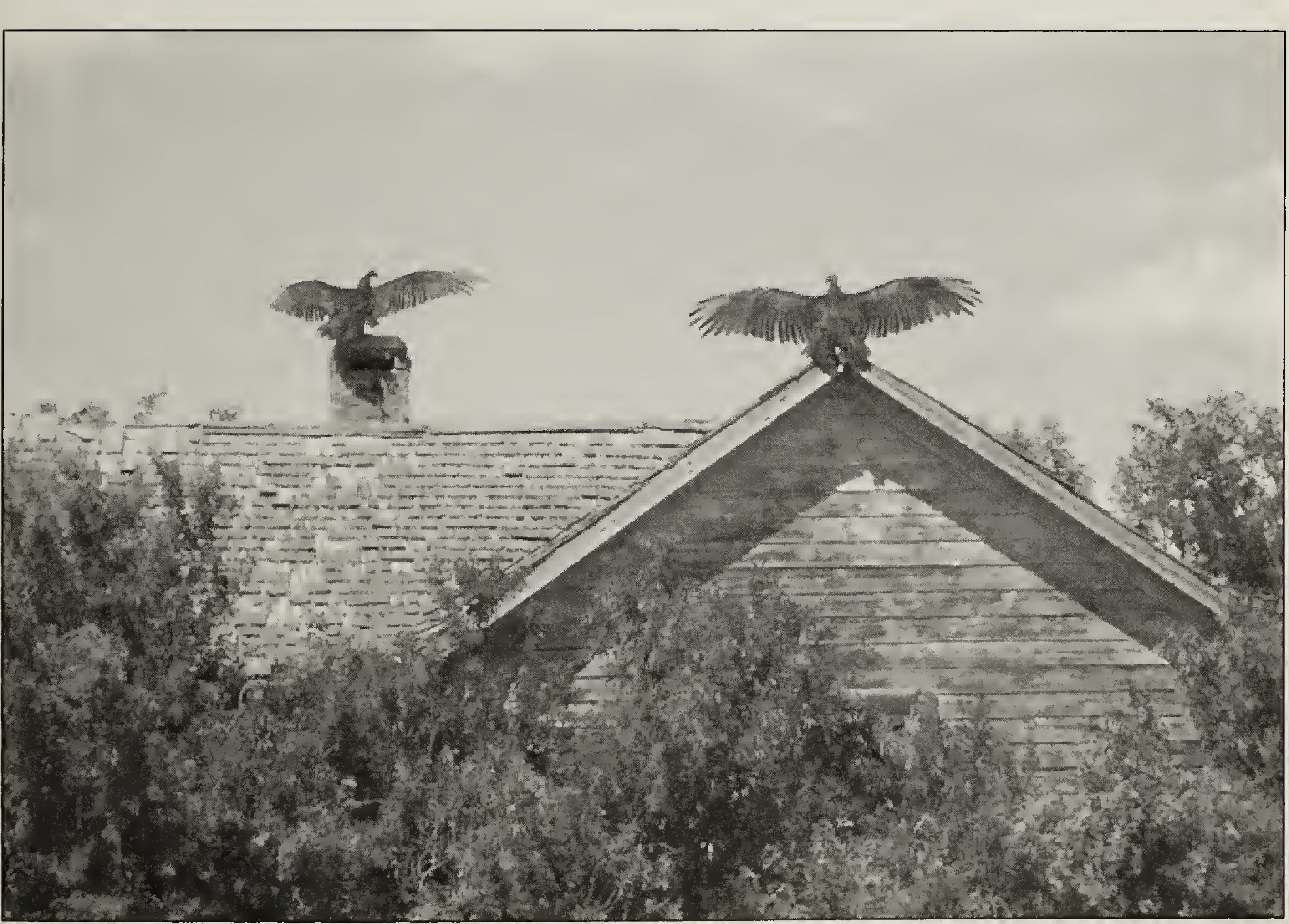
SWAINSON'S HAWK RECOVERY RECORD OF 18 YEARS

Through information from biologist Jose Sarasola in Argentina and Marc Bechard in Idaho, via Stuart Houston in Saskatoon, I learned of the recovery of a Swainson's Hawk I had banded on 17 July 1988 near Cereal, Alberta. Band No. 987-87121 was one of a number banded on a ranch where I had been banding Swainson's Hawks for several years. The bird was found dead of unknown causes in Quemu Quemu in LaPampa province in Argentina in February 2007. Stuart calculated that this bird, making 18 trips northward and 19 trips south, would have travelled over 400,000 km in its lifetime, assuming an average direct-line minimum of 10,760 km per trip. Certainly for me the minimum 10,760 km distance is the longest recovery distance in my long banding career, which goes back to 1940. Permit #0740.

- *Edgar T. Jones*, 119 Creekside Terrace, 291 Blackburn Drive E. SW., Edmonton, AB T6W 1B9



A pair of Turkey Vultures on top of an old abandoned house along side the grid road east of Edam, SK on June 24, 2007. *Garry and Ian DeBusschere*

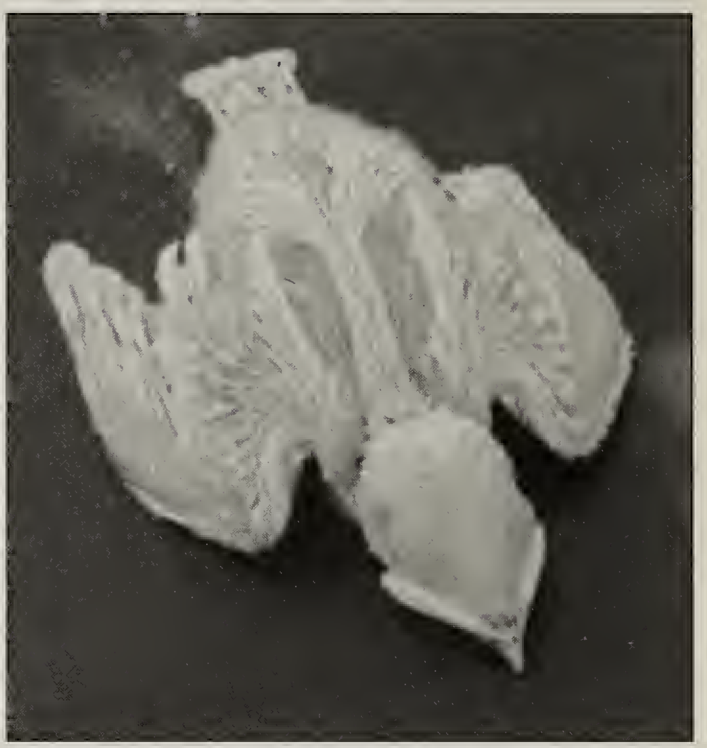


Once we stopped our car they went into this spread wing stance and stayed like that for 5 or 10 minutes. They were still like that when we drove away. The pictures were taken from our car. *Garry and Ian DeBusschere*

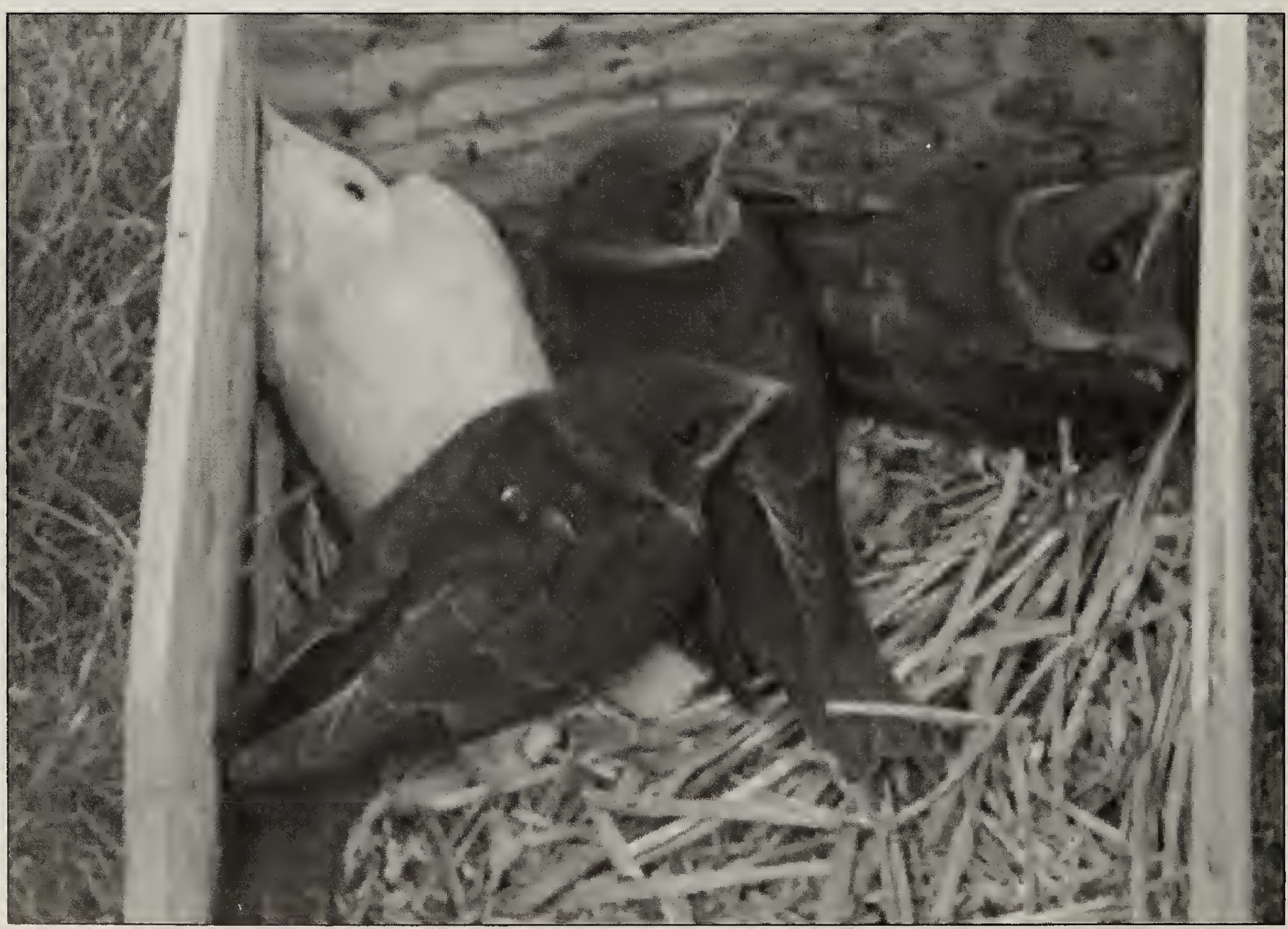
ALBINO PURPLE MARTIN NEAR SASKATOON

A pale-coloured Purple Martin hatched around July 5 in a clutch of four nestlings. On July 17, while doing nest checks, I noticed that this bird was different and thought it might be an albino due to its red eyes. On July 19, when banding the nestling, Mary Houston confirmed that it was indeed an albino. From that point on, we took pictures of it on an almost daily basis. It was basically the same as its siblings except for the red eyes, pink skin and white feathers. (See photograph on inside back cover.) The Albino fledged successfully on August 2 at about 10:30 a.m., at an age of 28 days. It has been a a true pleasure to have hosted such a rare and unique individual.

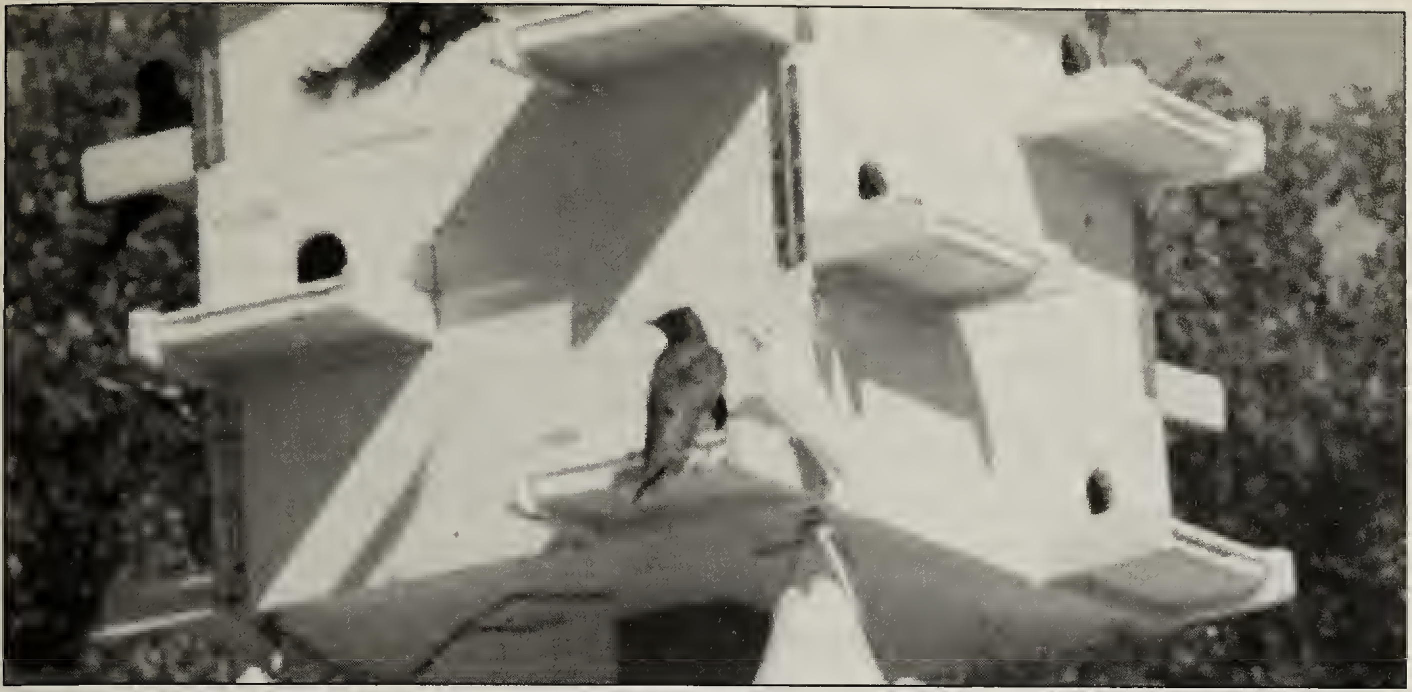
- *Gerald J. Parent*, RR#5, Site 503, Box 40, Saskatoon, SK S7K 3J8



Albino Purple Martin, 21 July 2007. *G. Parent*



Albino Purple Martin with three nestlings, 28 July 2007. *G. Parent*



Albino Purple Martin receiving instructions from adult before first solo flight, 2 August 2007. *G. Parent*

WHITE BARN SWALLOWS NEAR USHERVILLE, SK

Figure 1 shows two of the three white Barn Swallows born to a pair of typically-coloured parents on approximately July 10, 2007 on the Fialkowski farm (NW 5-38-5 W2nd), 1 mile west of Usherville. The photograph was taken on July 19. The white birds did not have red eyes and a fourth young in the nest had normal coloration. The swallows managed to leave the nest and, as of August 11, they were flying around the Fialkowski farm.

- *Micheal Fialkowski*, Box 187, Endeavour, SK S0A 0W0. E-mail: <fialkowski84@hotmail.com>

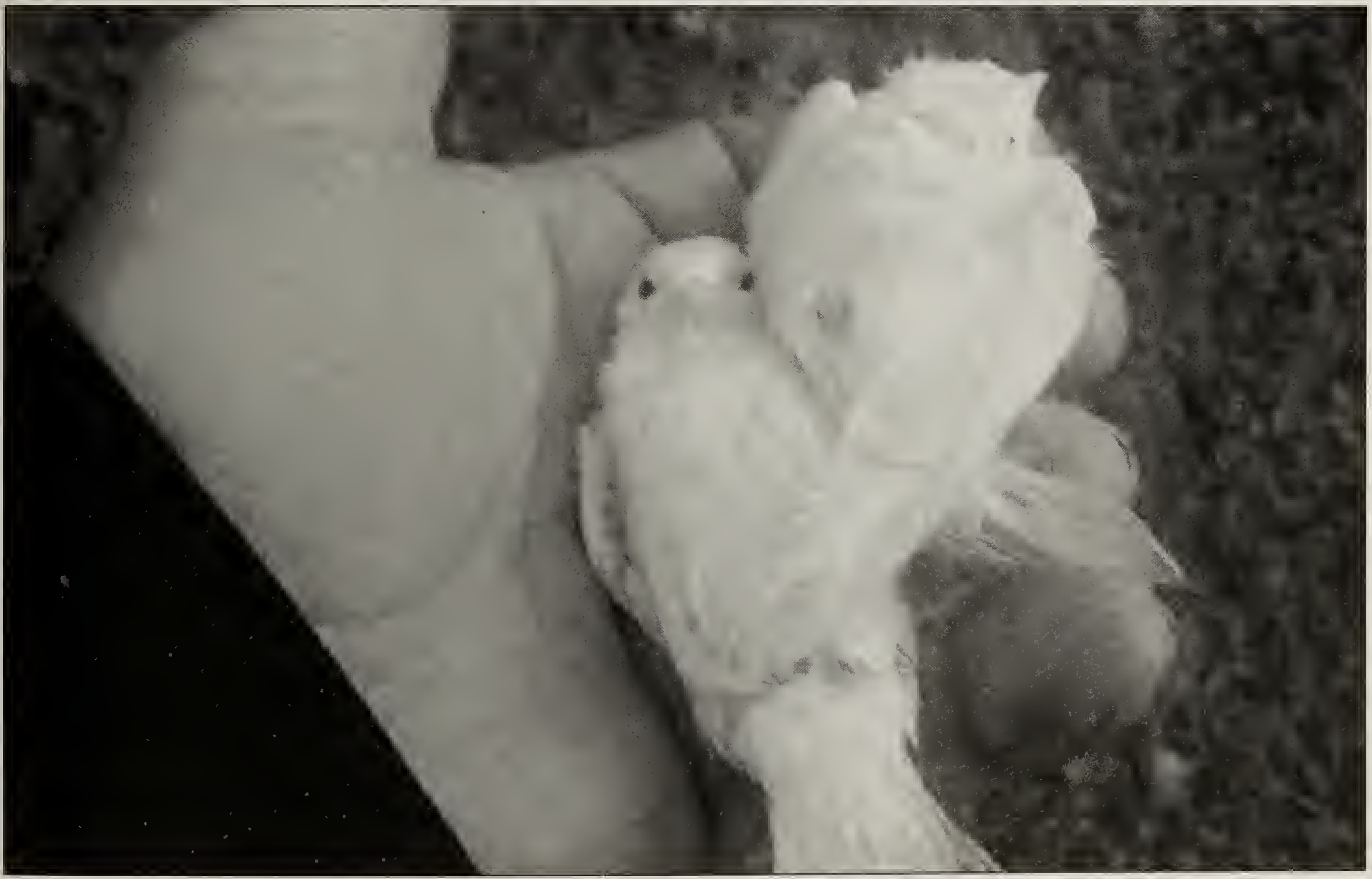


Figure 1. Two of the white Barn Swallows, photographed on 19 July. They were unable to fly at this time because their feathers were wet. *M. Fialkowski*

EASTERN PINE ELFIN IN SASKATOON YARD

On 11 May 2007, while taking care of some yard work in my grandparent's back yard in Saskatoon, I noticed a small brown butterfly that I was pretty sure I hadn't seen before. I was able to catch it and take it home for identification. Using assorted field guides, I narrowed it down to a Pine Elfin, but was unsure whether it was an Eastern or Western Pine Elfin. I took photographs before releasing it and sent them to Mike Gollop, who identified it as an Eastern Pine Elfin. (See inside back cover.) Mike also noted that this was a first record for Saskatoon.

- *Andy Salisbury*, 2232 Ewart Avenue, Saskatoon, SK

Editor's note: This individual could have been a stray from the McDowall area, where the species occurs regularly. Other possible explanations for its appearance in Saskatoon are that the species is expanding its range southward among planted pines or that this individual was transported to Saskatoon on a pine tree.

EUROPEAN SKIPPER POPULATION EXPLOSION AT THE PAS, MB

In July 2005, European Skippers rose in clouds in front of hay cutting equipment in the hay fields 12 miles west of The Pas, only to settle and rise again. This is remarkable considering that I collected my first specimen of this species on the Grace Lake Road on 14 July 1998 - a short seven summers before. This is only seven generations since its first arrival in the area around The Pas. This is an exponential population explosion.

The endless availability of Brome Grass (*Bromus inermis*) used as caterpillar food may have precipitated this local population explosion. It will be intriguing to see how quickly it will cross the Saskatchewan River and move westwards. Brome Grass has been planted along roads and this will provide food for the larvae. Specimens taken on the Grace Lake Road all nectared on alfalfa, a plant that also occurs in quantity along roadsides.

My experience with this species in Manitoba goes back to the early 1970s when I first collected it behind the Manitoba Museum in Winnipeg some 450 miles to the south.[1] It had rained during the night, producing puddles a few inches deep in the gravel next to the museum. Numbers of Grey Coppers were sitting around the edge of a puddle, drinking. It had the makings of a hot day. On walking behind the museum and to the river edge, I saw a small, pale orange skipper flying in numbers among the tall grass. On netting a specimen, I recognized it as the European Skipper, *Thymelicus lineola*. I was familiar with it from specimens in my collection from England, France and Switzerland. In the afternoon, more of the skippers could be seen skimming the tops of the high Brome Grass. I was able to collect a good study series, now preserved in my collection. About 4% of the specimens were cream-coloured.

1. KRIVDA, W. 1976. The European Skipper, (*Thymelicus lineola*), a new Manitoban butterfly. *News of Lepidopterists Society* 5:5

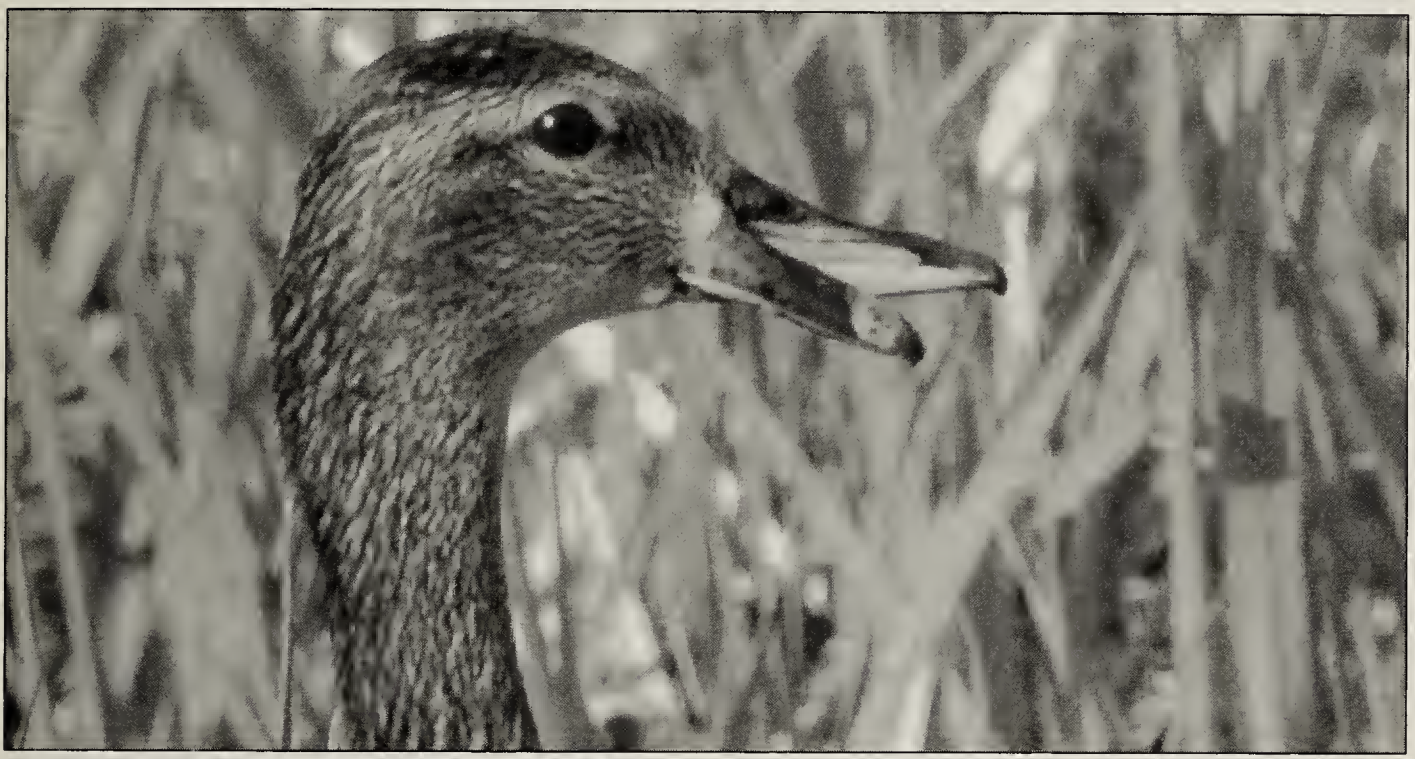
- *Walter Krivda*, P.O. Box 864, The Pas, MB R9A 1K8

MALLARD WITH UNUSUAL BEAK

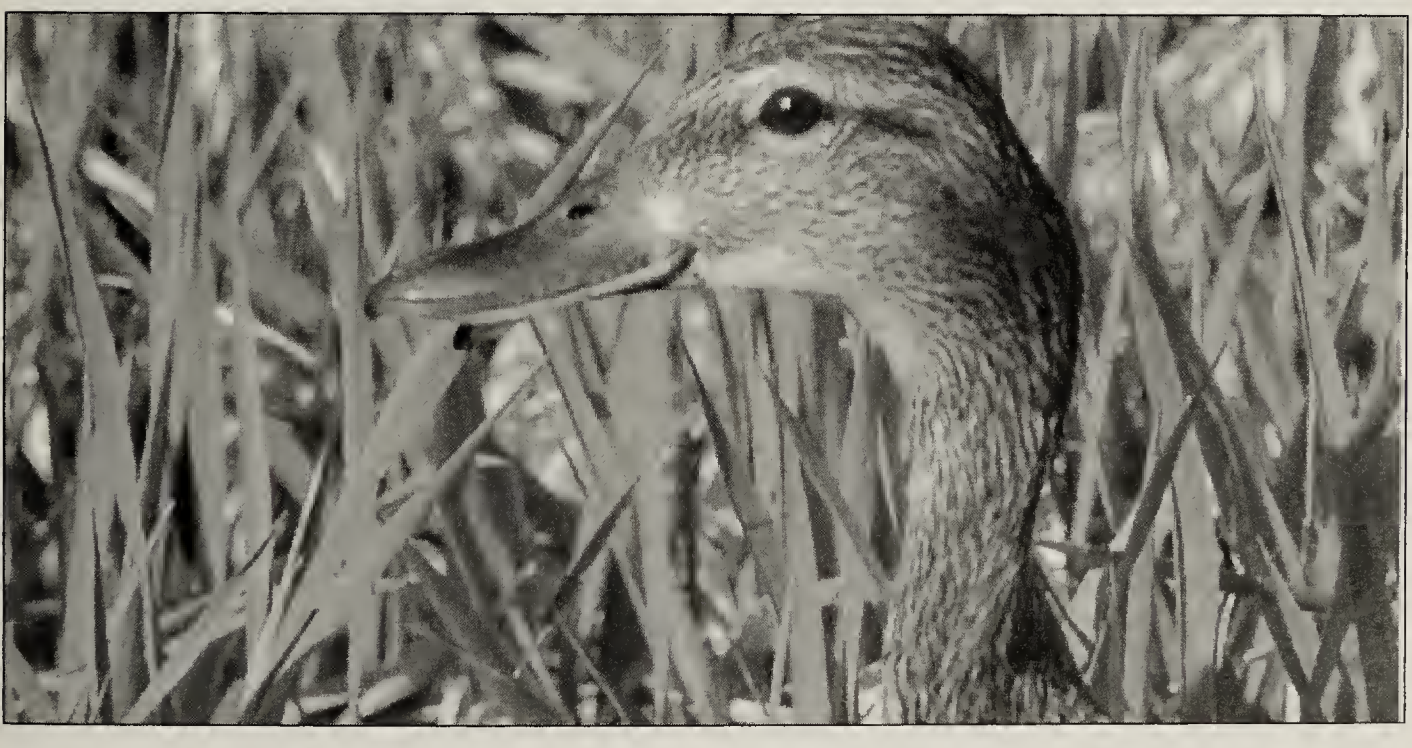
These photographs of a female Mallard were taken in early May 2007 by David Coates near his acreage in the Milk River district of southern Alberta. At first glance, it appears that the bird is deformed, with a second bill on the right side. However, close examination of the photos suggests that the original bill may have been cut or split. It is hard to imagine what kind of accident would cause this.

Otherwise, the bird looked normal. She was one of a pair when first spotted in a roadside ditch. The male quickly flew away and after David got a couple of photographs, this bird followed.

- *Bill Monro*, 1419 - 7A Street N. W.,
Calgary, AB T2M 3J9



Unusual beak on female Mallard *David Coates*



The same bird, showing the other side of the beak which looks normal. The tip of the split portion of the beak on the other side extends a bit below the lower edge of the beak in this picture. *David Coates*

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BEGINNER'S GUIDE TO BIRD SONGS OF NORTH AMERICA

JOHN NEVILLE and MEL COULSON. 2007. Audio 3CD set. Neville Recording & Mel Coulson. ISBN: 0-9781797-2-2. www.nevillerecording.com. $33.00 Cdn.

Many people, especially when they first become interested in birds, find identifying bird calls and songs more challenging than identifying the birds which produce them. Anxious to improve their skills, they often turn to the readily available recordings of bird song on CDs, DVDs and the Internet. Most of these sources are collections of hundreds of species, with each given only a few seconds play. These recordings can be helpful if the listener singles out a particular species or a small group of related birds, thrushes, for instance, or grass sparrows. But try to listen to a large number of bird songs, one after another, and the result is almost inevitably frustrating, even destructive. Memory doesn't work that way.

John Neville, originally from England, realized when he arrived in Canada in 1975, that bird identification of hundreds of new species would involve sound as much as sight, something he had almost unwittingly taken for granted back home where he had begun birding as a boy. Gaining technical proficiency, he began recording birds in British Columbia. His first CD, *Birds of the Kootenays*, came out in 1994. Since that time he has produced a large number of CDs, including *Bird Songs of the Okanagan*, *Songs and Sounds of the Canadian Rockies*, *Bird Songs-Western Boreal Forest*, and *Bird Songs of the Arctic*.

A Beginner's Guide to Bird Songs of North America is perhaps Neville's most ambitious production to date. Collaborating with Mel Coulson, who does most of the narrating in this 3CD collection, he introduces us to 108 bird species in seven lessons, representative of both eastern and western North America, and arranged by habitat groupings. He believes that if you learn how to listen, developing your skills and confidence at the same time, you'll eventually feel comfortable with the birds in these recordings, and then be ready to take on the others.

Neville's approach is somewhat different from that in any other series of bird song recordings I've listened to. First of all, more time is devoted to each bird song. He also provides an introduction to each species, mentioning predominant habitat, North American distribution and, often, one or more memorable facts about the bird, just enough to assist memory and add interest. Finally, the pace is relaxing. After presenting a group of no more than 10 to 14 species, he provides a quiz, a replay of the bird songs just heard - but in a changed sequence. Before moving on, listeners will likely want to replay that section several times until they feel comfortable with the sounds and can correctly identify all of them. In the last half of Disc 3, he reviews the birds by family: warblers, sparrows, flycatchers, thrushes, and wrens, then finishes with "weird sounds in the reeds" and what he calls the "true songsters."

Neville's recordings are of high quality. Interestingly, they retain considerable background song, typical of the habitat in which a specific species is found. Other songs may seem an interference at first, but learning to isolate a particular song amid a chorus of others is exactly what the birder must learn to do. Replaying the song several times is a helpful experience and as the listener becomes more experienced, it is also a challenge to identify other songs in the background.

Most of the species on these discs can be found in Western Canada. Several pairings of the similar songs of western and eastern species are not only interesting, but helpful as one grows in birding experience and travels more widely. He introduces us to Eastern and Western Wood Pewees, for instance, Scarlet and Western Tanagers, Western and Eastern Meadowlarks, Eastern and Spotted Towhees, Steller's and Blue Jays, and Western and Eastern Screech Owls. A small number of the songs sound slightly foreign to my Saskatchewan ear, among them the Spotted Towhee, Common Yellowthroat and Baltimore Oriole. Some of the finest recordings I have ever heard are those of the Olive-sided and Willow Flycatchers, Eastern and Western Kingbirds, Ruby-crowned Kinglet, Barred Owl, Common Nighthawk, Swainson's Thrush, Yellow-headed Blackbird, Pied-billed Grebe, and Sora.

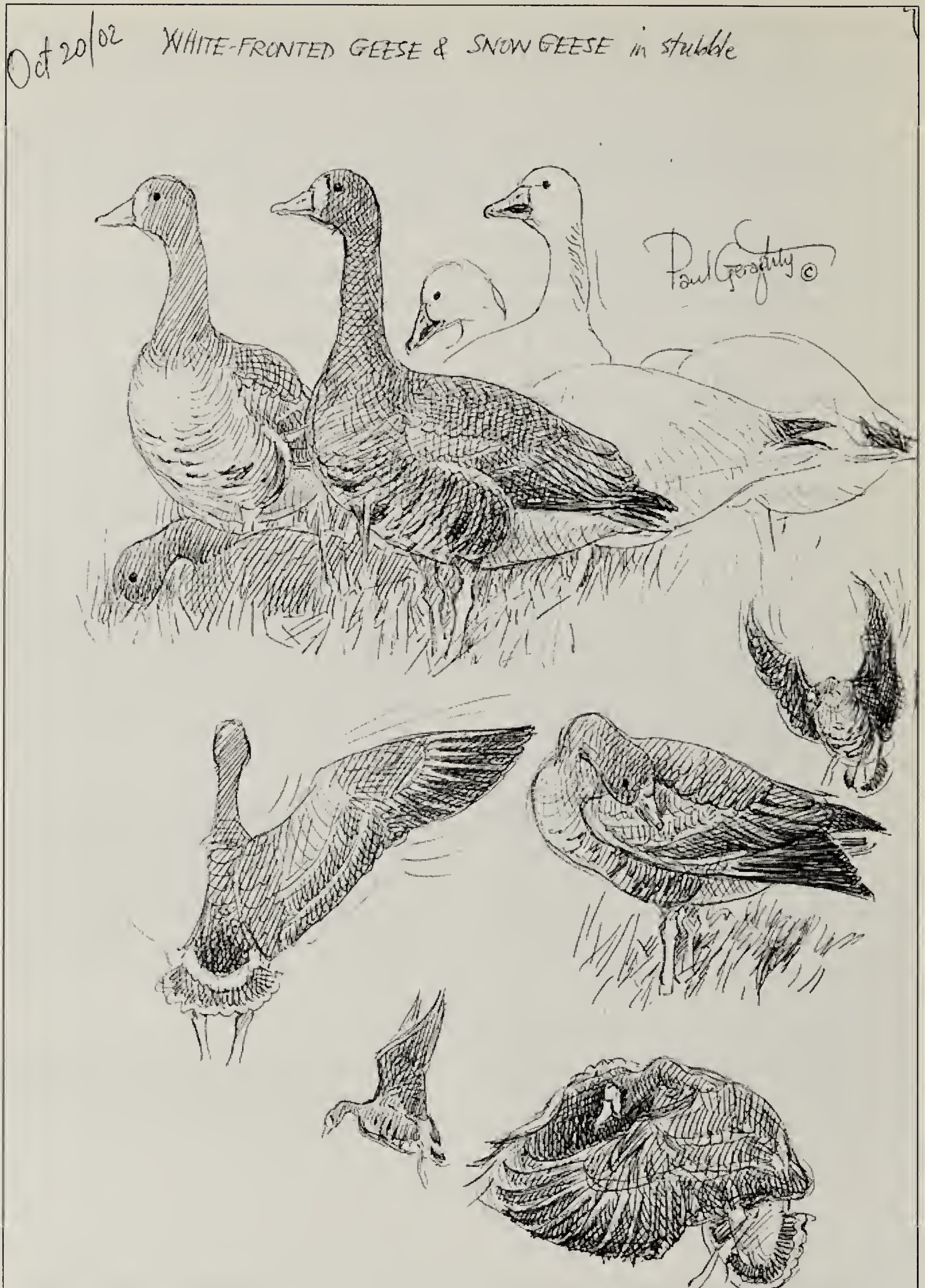
It is important to remember that this three-volume set is not a full catalogue, even of common bird songs. Neville's intention is to teach people how, when and where to listen and learn. After using these discs, people will feel much more comfortable with the more complete, even though abbreviated calls and songs, in the recordings of Stokes, Peterson and others. Should Neville produce a second set in this series, beginning birders would profit from hearing the rest of the common warblers, and a wide range of shorebirds, marsh birds, gulls, terns, ducks and geese, not found in the present set.

This reasonably priced set will be a boon to beginners here and elsewhere in Canada. Even experienced birders will profit from a close listening; the treatment of the sounds made by Hairy and Downy Woodpeckers is particularly useful.

- Reviewed by J. Frank Roy, 912-606 Victoria Avenue, Saskatoon, SK S7N 0Z1. E-mail: <jfroy@shaw.ca>

* * *

"The Autumn Equinox passes scarcely noticed. The season is well ahead of the almanac, always. All September belongs to autumn."
Hal Borland, *Beyond Your Doorstep*, p. 347.

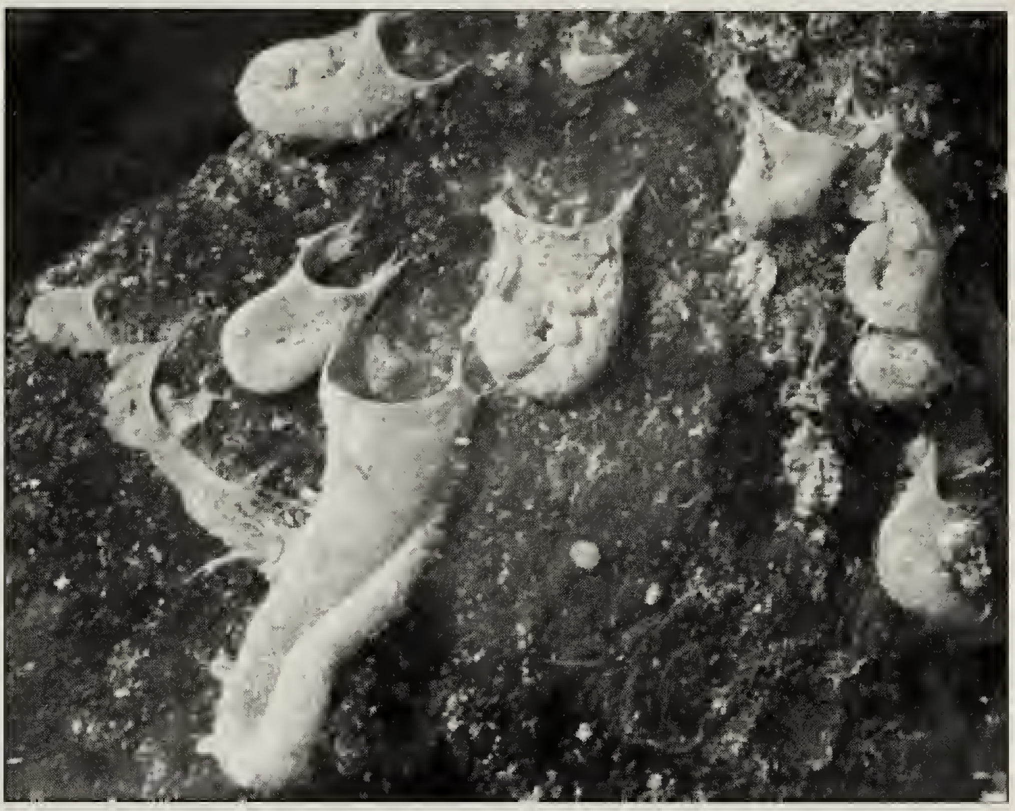


Oct 20/02 WHITE-FRONTED GEESE & SNOW GEESE in stubble

MYSTERY PHOTO

SEPTEMBER 2007 MYSTERY PHOTO

These 6-to-7 inch-long, gelatinous nets open into the current and are attached to rocks in shallow water (two inches to a foot deep). They appear to be empty. They are common above the rapids on the Paull River in northern Saskatchewan. Who makes them and what is their function?



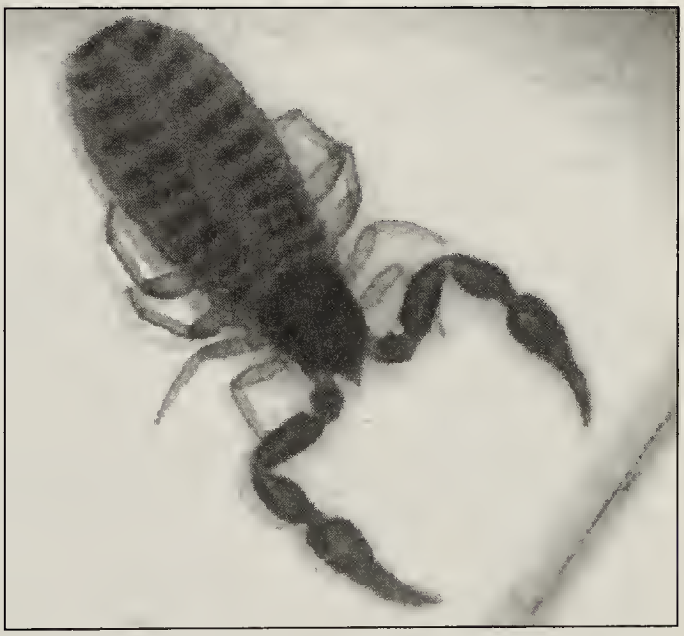
ANSWER TO THE JUNE 2007 MYSTERY PHOTO

Ron Hooper writes: " I expect that the pseudoscorpion on the crane fly was probably feeding on mites. Small mites commonly live on insects. Pseudoscorpions feed on small soft bodied insects or arachnids, which they kill by poison from glands in their pincers."

The pseudoscorpions do not harm the insect but rather, by eating the mites, perform a service for the insect, the insect then gives the pseudoscorpions a ride to the next site.

The House Pseudoscorpion (*Chelifer cancroides*), or false scorpion, is the species most commonly encountered. It inhabits houses where it also eats insects. Pseudoscorpions have a pair of appendages attached at the side of the head. These are called pedipalpi and are twice the length of the legs. Like true scorpions, pseudoscorpions have a set of pincers on the end of each pedipalp but they lack a stinger on the end of the abdomen.

The editors thank Ron Hooper and Robin Leech for contributions to this mystery photo answer, and Robert Bercha for the photographs of the pseudoscorpion and crane fly.



Pseudoscorpion found on crane fly
Robert Bercha © 2007.

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Common names are used for birds, mammals, butterflies, reptiles and amphibians. Bird names follow the Checklist of North American Birds by the American Ornithologists' Union (7th edition, 1998); mammal names, Mammal Species of the World by Wilson and Reeder; butterfly names, The Butterflies of Canada by Layberry *et al*; and names of reptiles and amphibians follow Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico by Committee on Standard English and Scientific Names, Brian I. Crother, chair (2001). For other groups, both scientific and common names are included.

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